ARCHLine.XP® 2010

News

Release 1

This manual was produced using *Microsoft Word* and *ARCHLine.XP®*.

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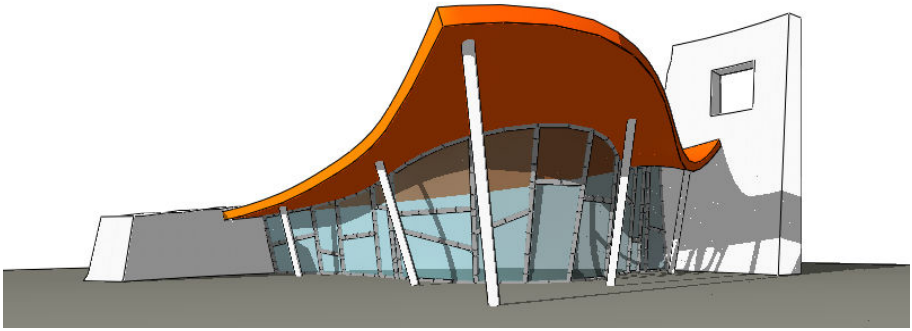
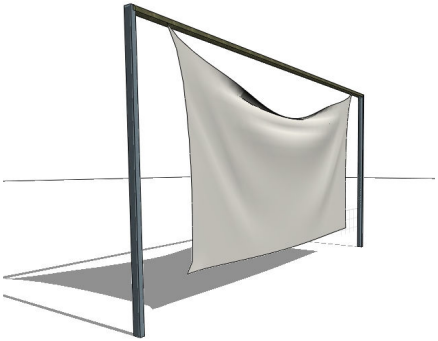
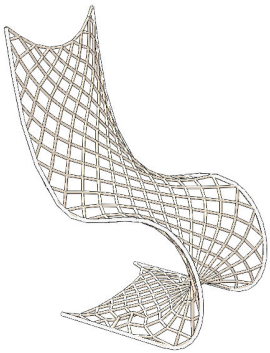
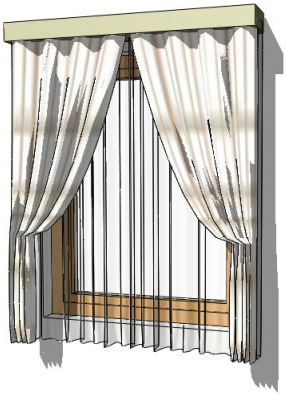
1. Freeform Surface

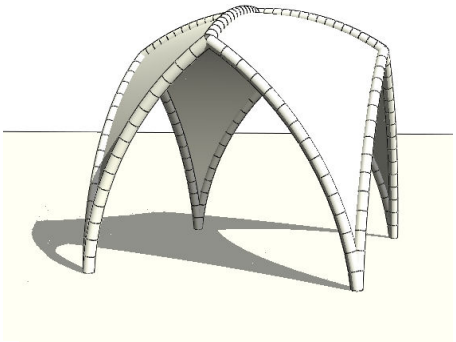


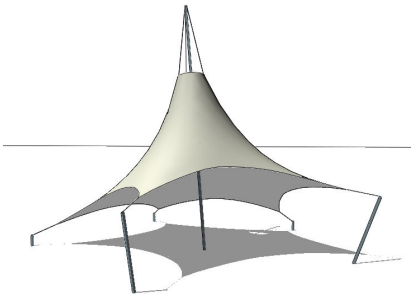
ARCHLine.XP® 2010 introduces a new tool to model freeform surfaces. It can be used to create architectural structures like curved roofs and curtain walls, custom vaults or tent structures as well as textiles for interior design: draperies, curtains or table cloths.







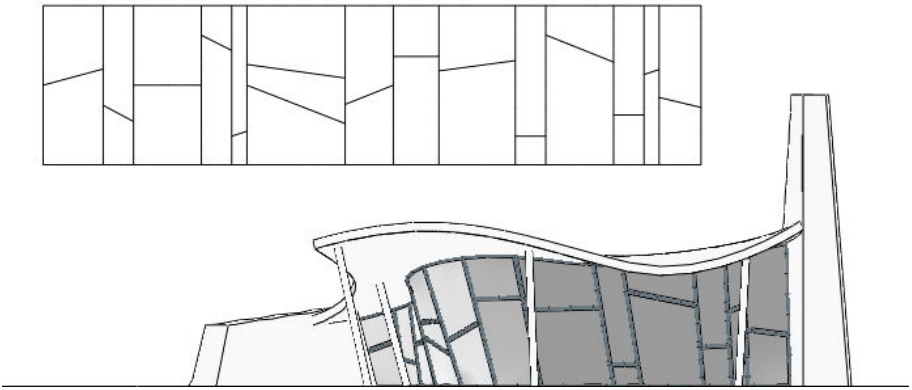




1.1. Working with Freeform Surfaces

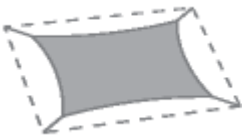
1.1.1. Layout and 3D model

The shape of a freeform surface is based on its layout. To create a freeform surface you have to define a layout first. Later, to make topological changes (inserting or deleting a node, cutting out a hole, etc.) you have to edit the layout of the surface. By default the layout appears as a flat surface in the 3D space. You can distort it in many ways: by fixing or moving nodes or edges, by adding control lines, or by letting the gravity take effect.



1.1.2. Physics

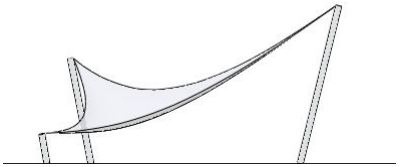
Freeform Surfaces can have two different physical models: Membrane and Textile. Membranes always tenses between fixed points, textiles can crease. Typically, set the physical mode to Membrane for a tent structure and Textile for a table cloth.



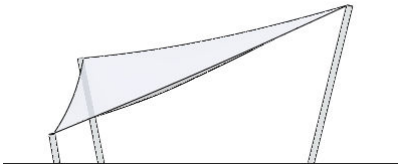
Membrane

Textile

You can tense the cables, outline edges and control lines separately; this will affect the shape of the freeform surface.



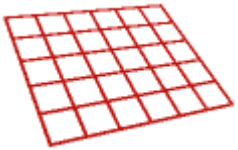
Lower outline stretch



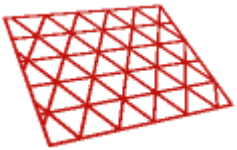
Higher outline stretch

1.1.3. Grid patterns

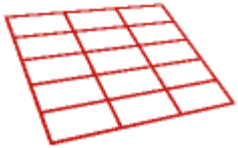
Grid patterns determine the look and physics of freeform surfaces. Four patterns are available: Square, Triangle, Rectangle and Monodirectional.



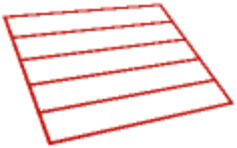
Square



Triangle

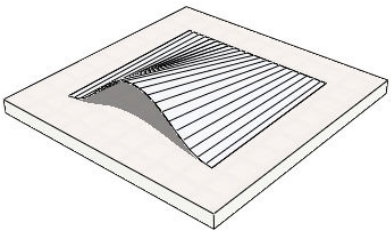


Rectangle



Monodirectional

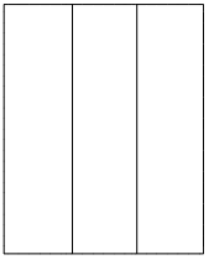
For textiles with realistic crease use the triangle pattern. Use the square or the rectangle pattern for architectural structures like curtain walls. You can define surfaces with straight rulings like a conoid using the monodirectional pattern.



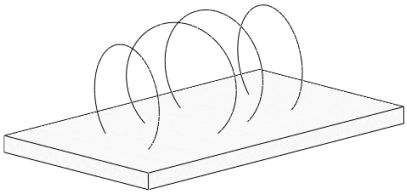
Conoid with monodirectional pattern

1.1.4. Control lines

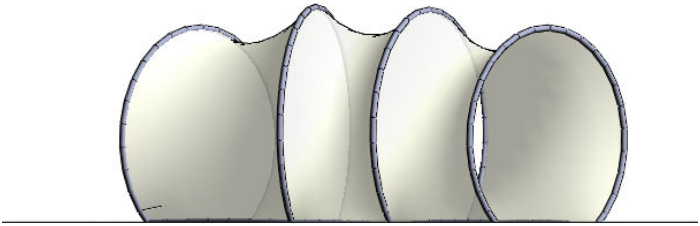
On the layout of the surface you can define so called control lines. Once you have control lines on the layout, you can fix them in the 3D space to any existing curve or simply turn them into straight or curved line.



Layout with the outline and two control lines

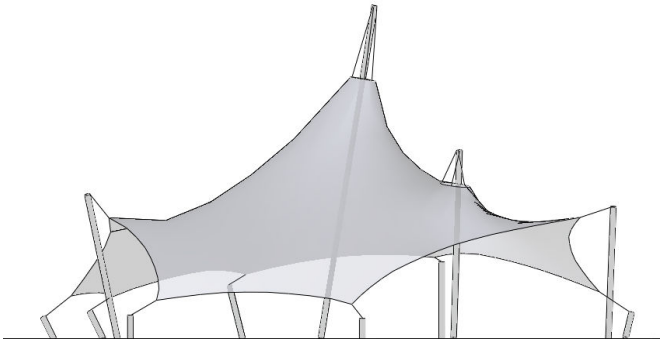


3D curves to which the outline edges and control lines can be fixed



1.1.5. Cables

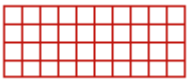
You can add cables to the surface, in this way you can easily create models of tent structures.



1.1.6. Representation

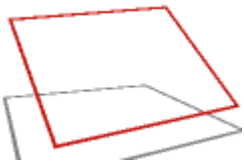
You can visualize a freeform surface in many ways. In the 2D window, you can select between outline and mesh representation. The outlines are drawn according to the general properties (color, line type, line width) of the element, in case of using the mesh representation; you can specify separate properties for the gridlines.

Outline

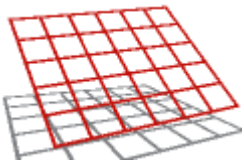


Mesh

In the 3D window the freeform surface can be visualized as a mesh or a surface, in addition you can combine these representations. The edges of the mesh can be represented as a simple line or you can define profiles for them.

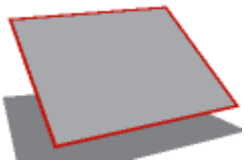


Outline

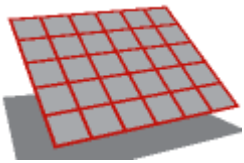


Mesh

Surface

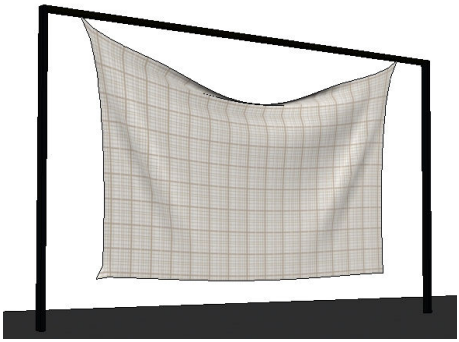


Surface and Outline

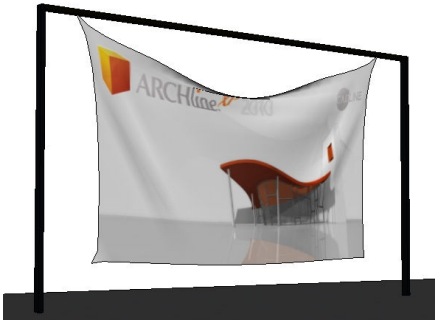


Surface and Mesh

You can assign different materials to the top and bottom side of the surface. By switching off the *tiling support* for a material, you can extend a picture to the whole surface. In the element has a positive thickness, you can define side material (material of the edges of the surface) and solid material (material of the cross section) as well.



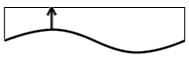
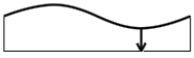
Top material with tiling support



Top material without tiling support

1.1.7. Thickness

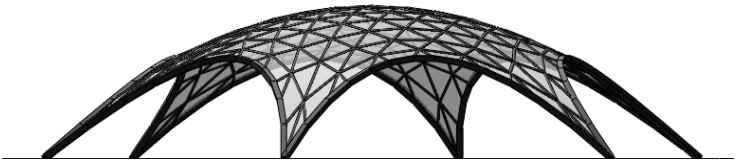
By default the mesh is represented as a thin surface. You can turn it into a solid by changing its thickness value. You can use positive or negative values; in case of using negative thickness value the second surface of the solid will appear under the first one.

	Perpendicular	Vertical	Box extension
Positive thickness			
Negative thickness			

To create the solid the program extrudes the surface by the given thickness perpendicular to itself or vertical. In addition you can select “Box extension”, in this case the solid will be bounded by the freeform surface and a horizontal plane, the thickness is measured from the highest or lowest point of the surface, depending on the sign of the thickness value.

1.1.8. Structure

You can represent a freeform surface as an architectural structure by assigning profiles to different types of edges. Different profiles can be assigned to outline edges, control lines, gridlines and cables.



1.1.9. Curtains and Table cloths

In addition to using custom freeform surfaces, *ARCHLine.XP®* provides two wizards to make easier the use of creation and modification of curtains and table cloths.

Curtain

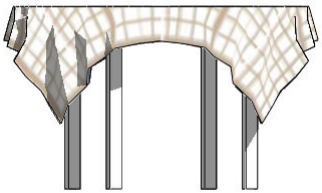
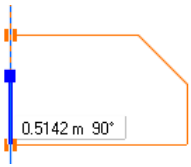
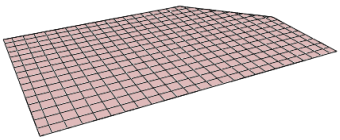


Table cloth

1.2. Creating a Freeform Surface

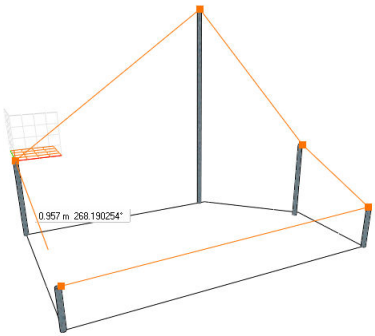
Generally, the creation of a freeform surface begins in a floor plan window by defining the layout of the surface. The *Profile definitions* tools appear in the Toolbox, you can draw the profile or select the **Point of profile** or **Point of profile with islands** option to use an existing contour. Once you have the layout profile, the 2D drawing and the 3D model of the freeform surface will be created according to the default settings. Initially the 3D model is a horizontal flat surface at the default level, with fixed corners

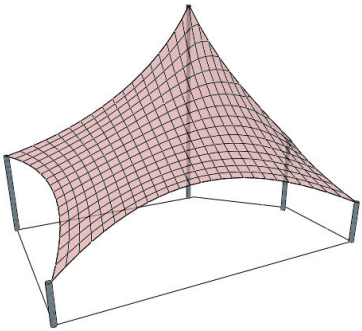




In addition you can start to create a freeform surface in the 3D window. Here you can define points one after the other, finally click the first point again or

press ENTER. Now the layout of the surface has been generated automatically as a polygon based on the 3D points projected to a horizontal plane at the default level.





The layout is generated by projecting the points to a horizontal plane, therefore start creating the freeform surface in the 3D window only if the structure has a horizontal character like a tent structure. If the surface to be created is not of this kind, like a mainly horizontal hanging textile, first create the layout in the 2D window and then fix its nodes and edges to the appropriate 3D positions.

1.3. Modifying the 3D model

There is no further command in the Toolbox or in the main menu related to the freeform surfaces; you can work with them using the Popup menu and the markers

1.3.1. Popup menu commands

Edit layout

First you have to place the symbol of the layout, use the TAB key to choose the appropriate insertion point. Once the layout has been placed, the *Edit profile* tools appear in the Toolbox and you can edit the current profile of the layout: move or nodes or edges, add holes, etc. You can finish by pressing ENTER key. The surface will be regenerated based on the new layout, the fixed edges and nodes will be kept if necessary.

Place layout

First you have to place the symbol of the layout, use the TAB key to choose the appropriate insertion point. The layout of the surface will be drawn based on its current 2D representation settings.

Add control lines

First you have to place the symbol of the layout, use the TAB key to choose the appropriate insertion point. Once the layout has been placed, the *Profile definitions* tools appear in the Toolbox and you can draw one or more control lines on the layout. Control lines cannot exceed the outline. If you have been finished, the new control lines appear on the 2D drawing and the 3D model of the surface and you can fix them in the 3D space to any existing curve or simply turn them into straight or curved line by selecting the appropriate command from the marker menu. You can modify the control line on the layout or delete it by selecting **Modify Control Line On Layout** or **Remove Control Line** in the marker menu.

Reposition grid

First you have to place the symbol of the layout, use the TAB key to choose the appropriate insertion point. Once the layout has been placed, you can define the direction of the grid pattern graphically by drawing the direction vector.

Fix nodes

You can select points on the surface. If you have been finished, press ENTER. The fixed points can be moved, elevated; you can attach cables to them by selecting a command from their marker menu. To delete such a fixed point, form the marker menu select **Release node.**

Define gravity vector

By default the gravity vector is vertical. You can specify a different direction graphically by drawing the direction vector.

Recompute shape

Normally, the shape of the surface is recomputed after all relevant modification. You can clear the **Automatic Recomputation** checkbox in the Property Manager, in this case the shape of the surface is recomputed only if you select this command from the Popup menu.

1.3.2. Marker menu commands

Move Node

Moves the current node. If it was a free node, it turns into a fixed one.

Elevate Node

Elevates the current node. If it was a free node, it turns into a fixed one.

Fix Node

Turns a free node into a fixed one.

Fix All Nodes

Turns all of the free nodes into fixed ones.

Release Node

Turns a fixed node into a free one.

Release All Nodes

Turns all of the fixed nodes into free ones.

Add Cable

Attaches a cable to the current node by placing the other endpoint of the cable.

Change Cable Length

You can modify the nominal length by giving a different value in the dialog box. Note that the real length may differ from this value depending on the current physical settings and geometry.

Delete Cable

Deletes the current cable.

Delete All Cables

Deletes all the cables.

Fix Edge

Turns a free outline edge or control line into a fixed one.

Fix All Edges

Turns all of the free outline edges and control lines into fixed ones.

Release Edge

Turns a fixed outline edge or control line into a free one.

Release All Edges

Turns all of the fixed outline edges and control lines into free ones.

Turn Into Straight Edge

Turns an outline edge or control line into a straight fixed edge.

Turn Into Curved Edge

Turns an outline edge or control line into a curved fixed edge by placing a third point of the arc. If you use this command in the 3D window, the curve

becomes a real circular arc. By starting this command on the floor plan, the curve becomes a spiral if the heights of its endpoints are different.

Turn Into Custom Edge

Fixes an outline edge or control line to an existing curve (like arc, ellipse or spline) or to an edge of an existing solid by selecting the appropriate curve or edge.

Turn All Into Straight Edge

Turns all the outline edges and control lines into straight fixed edges.

Modify Control Line On Layout

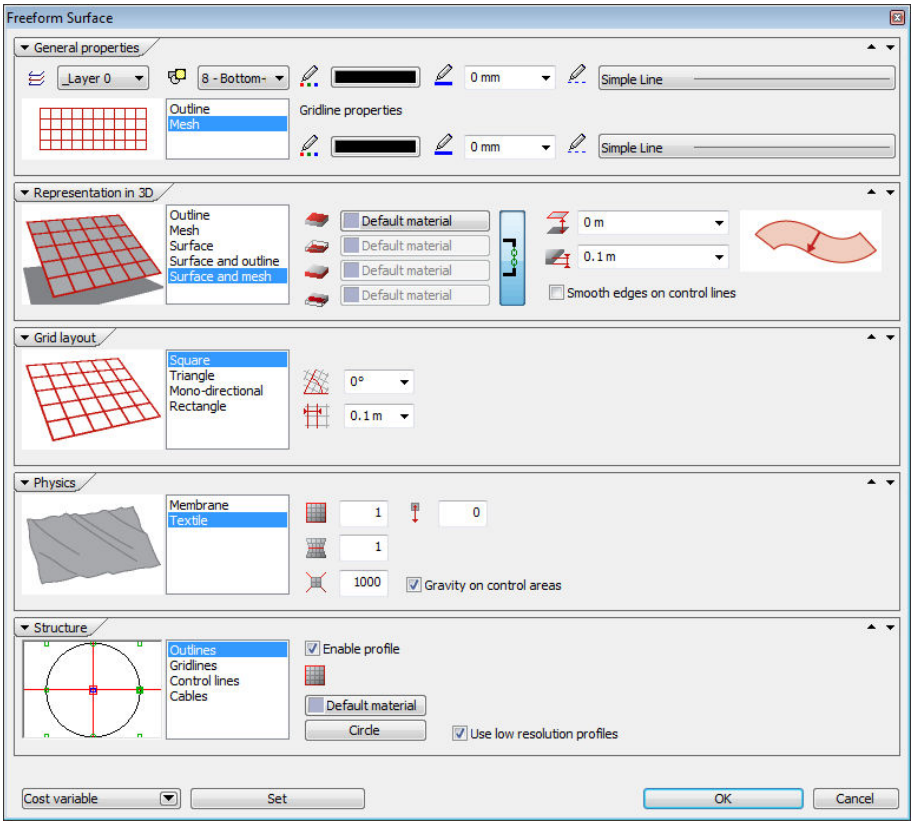
First you have to place the symbol of the layout, use the TAB key to choose the appropriate insertion point. Once the layout has been placed, the *Edit profile* tools appear in the Toolbox and you can edit the current control line. You can finish by pressing ENTER key.

Remove Control Line

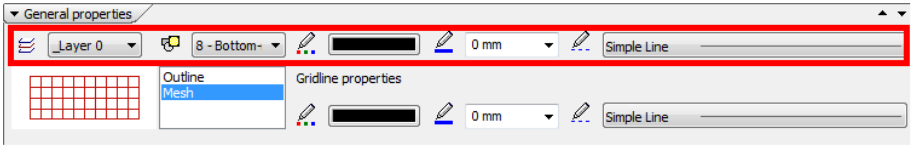
Removes the current control line from the layout.

1.4. Settings

You can change these settings by selecting a freeform surface clicking Properties from the Popup menu or by modifying any of the values in the Property Manager.

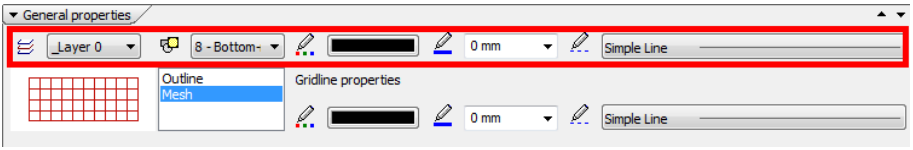


1.4.1. General settings



Layer and Drawing order relates to the whole element. The general color, line width and style are applied to the outline edges only, the gridlines are represented according to the Gridline properties.

1.4.2. Representation in 2D



Representation in 2D

On the floor plan you can represent the whole grid or the outlines only.

Gridline Color

Color of the gridlines. The outline is represented according to the general settings.

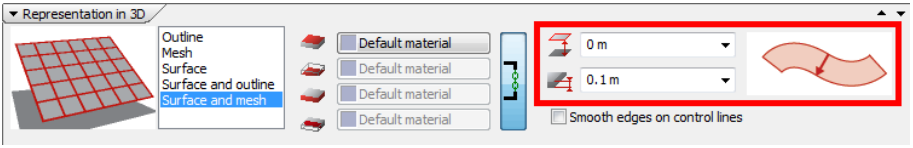
Gridline Type

Line type of the gridlines. The outline is represented according to the general settings.

Gridline Width

Width of the gridlines. The outline is represented according to the general settings.

1.4.3. Geometry



Relative height

Elevation from the floor level. The profile of the layout will be placed on that level. By changing this value you can elevate the whole structure.

Thickness

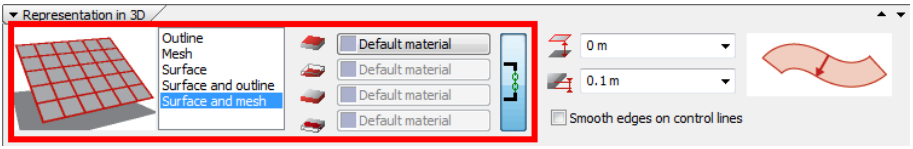
By setting the thickness to zero the mesh is represented as a surface, otherwise as a solid. In case of using negative thickness value the second surface of the solid will appear under the first one.

Solid Extrusion Mode

You can extrude the freeform surface by the given thickness perpendicular to itself or vertical. In the third case (Cut by Plane) the solid will be bounded by

the freeform surface and a horizontal plane, the thickness is measured from the highest or lowest point of the surface.

1.4.4. Representation in 3D



Representation in 3D

In the 3D window you can represent the outline, the gridlines, the surface or their combinations.

Top Material

Material on the top of the surface. Available only if the surface is represented in 3D.

Bottom Material

Material on the bottom of the surface. Available only if the surface is represented in 3D.

Side Material

Material of the sides of the solid. Available only if the surface is represented in 3D and the thickness is not zero.

Solid Material

Material of cross section of the solid. Available only if the surface is represented in 3D and the thickness is not zero.

Smooth Edges On Control Lines

If control lines have been added to the layout, they will be represented as a smooth or hard edge according to this setting.

1.4.5. Grid Layout

Pattern

The shape of a grid cell: Square, Triangle, Monodirectional or Rectangle. It has an effect on the computed shape of the mesh as well. To have a surface creasing realistically use the Triangle pattern. Use the Monodirectional grid to have Conoid surfaces.

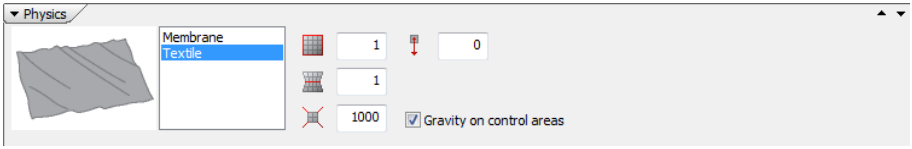
Direction

Direction of the main gridlines on the layout. You can also define the direction of the grid layout by selecting the Reposition Grid command from the Popup menu.

Spacing

Distance between two parallel gridlines on the layout

1.4.6. Physics



Gravity

Strength of the gravity force. You can set zero and negative values as well. In addition you can set a custom gravity direction by selecting the Define Gravity Vector command from the Popup menu.

Physical Model

Membrane always tenses between fixed points, Textile can crease.

Cable Stretch

You can tense the cables by increasing this value. Cables can be added to the surface by selecting the Add Cable command from the marker menu of a node.

Outline Stretch

You can tense the edges on the outline by increasing this value.

Control Line Stretch

You can tense the edges on the control lines by increasing this value. Control lines can be added to the surface by selecting the Add Control Lines command from the Popup menu.

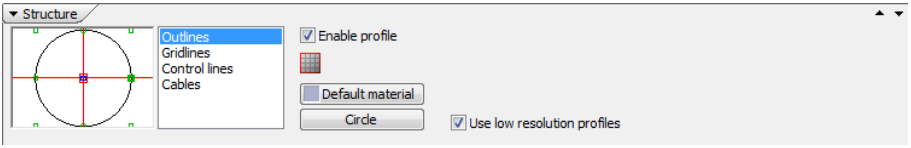
Automatic Recomputation (in the Property Manager only)

If disabled, the shape won't follow the changes until you select the Recompute Shape command from the Popup menu or enable this setting again.

Enable Gravity For Control Line Areas

Enables the gravity for the closed areas bounded by custom control lines.

1.4.7. Structure



Profile of Outline

Profile of the edges on the outline. Available only if the outline is represented in 3D. If the profile is disabled, outlines are represented as simple lines and will not appear on rendered images.

Material of Outline

Surface material of the profile of the edges on the outline.

Profile of Control Lines

Profile of the edges on control lines. Available only if the outline is represented in 3D. If the profile is disabled, control lines are represented as simple lines and will not appear on rendered images.

Material of Control Lines

Surface material of the profile of the edges on control lines.

Profile of Gridlines

Profile of the edges on gridlines. Available only if the mesh is represented in 3D. If the profile is disabled, gridlines are represented as simple lines and will not appear on rendered images.

Material of Gridlines

Surface material of the profile of the edges on gridlines.

Profile of Cables

Profile of the edges on cables. If the profile is disabled, cables are represented as simple lines and will not appear on rendered images.

Material of Cables

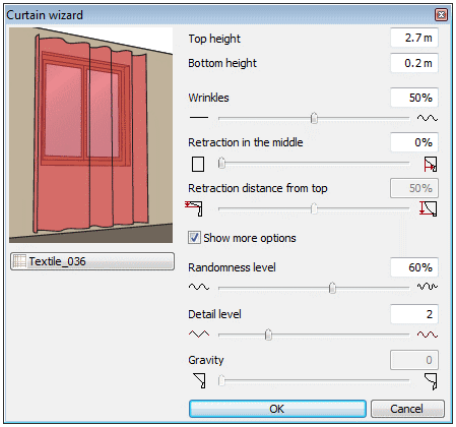
Surface material of the profile of the edges on cables.

Use Low Resolution Profiles

Use Low Resolution Profiles for cables, gridlines, outline edges and control lines. If disabled, the default resoluton will be used while generating the 3D model.

1.5. Using Curtain or Table Cloth Wizards

In the course of using the Curtain or Table Cloth Wizard you can define freeform surfaces based on some special parameters.



Curtain Wizard

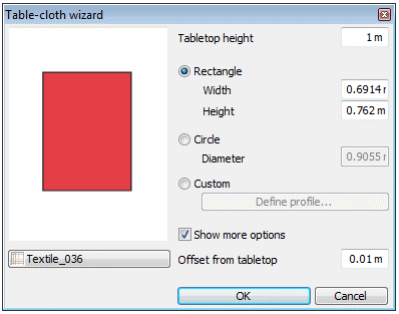


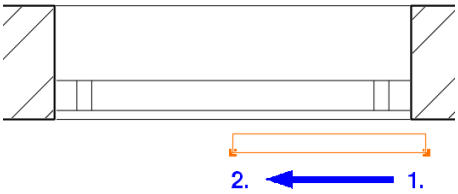
Table Cloth Wizard

If a freeform surface has been created by the Curtain or Table cloth Wizard, you can modify it as a general freeform surface by selecting Properties in the popup menu. In addition you can modify it as an element of the given special type by selecting Curtain or Table cloth Properties in the popup menu.

Note that you choose the second way of modification, the surface will be regenerated according to the new special settings, previous modifications that was made by general freeform surface commands will be lost.

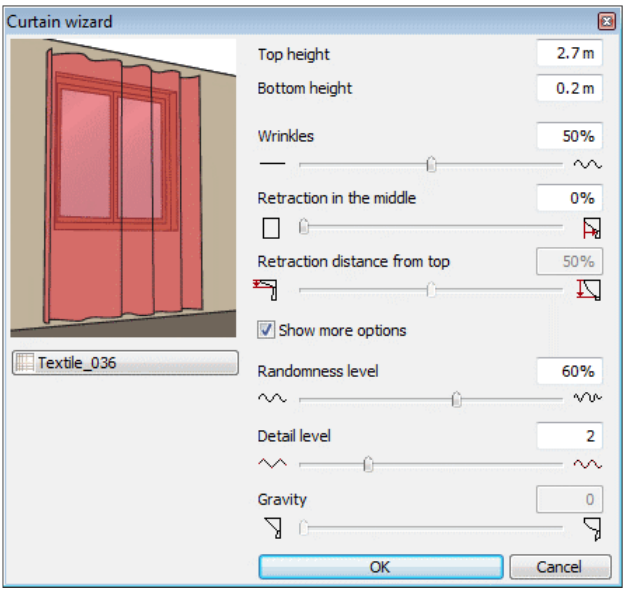
1.5.1. Curtain Wizard

To create a curtain, select the *Freeform Surface – Curtain* command from the Building group of the Toolbox. First you have to draw the bounding box of the curtain on the floor plan.



Note that if the “Retraction in the middle” value is positive, the curtain will be retracted towards the first point of the bounding rectangle.

Once you have drawn the bounding rectangle, the Curtain wizard dialog appears. Use the *Show more options* checkbox to make visible some technical parameters.
The curtain will be created based on the following settings:



Top height

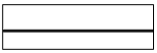
The height of the top of the curtain from the story level.

Bottom height

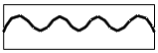
The height of the bottom of the curtain from the story level.

Wrinkles

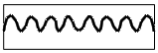
By means of this slider you can adjust the wave-form of the curtain. The lowest value results in a straight line.



Wrinkles: 0%



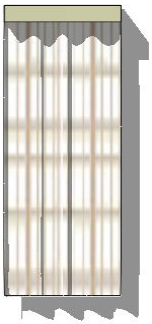
Wrinkles: 50%



Wrinkles: 100%

Retraction in the middle

By setting this slider to the lowest value you can define a straight curtain without retraction, otherwise the middle of the curtain will be retracted towards the second point of the bounding rectangle.



Retraction in the middle: 0%

Retraction in the middle: 50%

Retraction in the middle: 100%

Retraction distance from top

If the “Retraction in the middle” value is positive, here you can set the vertical position of the retraction. By setting it to 0% or 100%, the upper or lower edge will be retracted instead of the middle of the curtain.

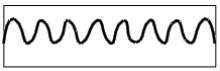
Retraction distance from top: 0%

Retraction distance from top: 50%

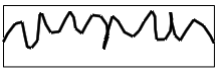
Retraction distance from top: 100%

Randomness level

You can choose between regular and random wave-forms.



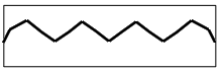
Randomness level: 0%



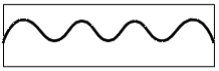
Randomness level: 100%

Detail level

The resolution of the freeform surface.



Detail level: 1



Detail level: 5

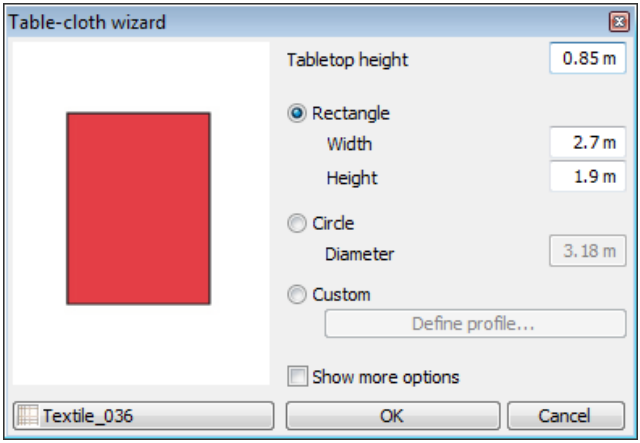
Gravity

The textile can “fall down” realistically by increasing the gravity value.

Gravity: 0 Gravity: 2 Gravity: 4

1.5.2. Table Cloth Wizard

To create a table cloth select the *Freeform Surface – Table cloth* command from the Building group of the Toolbox. First you have to define the profile of the table on the floor plan: the *Profile definitions* tools appear in the Toolbox, you can draw the profile or select the **Point of profile** option to use the contours of an existing table. Once you have the table profile, the Table cloth wizard dialog appears. Use the *Show more options* checkbox to make visible some technical parameters.
The table cloth will be created based on the following settings:



Tabletop height

The height of the top of the table from the story level. The table cloth itself will be created above this level, see the “Offset from tabletop” parameter.

Shape and profile of the table cloth

You can select rectangle, circle and custom shape for the table cloth. In the first two cases, the sizes of the table cloth layout must be set: width and height or diameter. In the third case, you can define the profile of the table cloth layout by clicking the Define Profile button: the *Profile definitions* tools appear in the Toolbox and you can draw the new profile. Note that the table cloth profile cannot intersect the table profile.

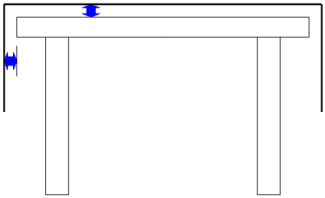
Rectangular table cloth

Circle-shaped table cloth

Custom oval table cloth

Offset from tabletop

To avoid overlapping surfaces in the 3D window and on the rendered images, the table cloth itself will be created above the tabletop level.



2. Light Sources

ARCHLine.XP® facilitates the creation and use the light sources. You can attach a light source to any object. You can edit the properties of light sources and modify their positions in the 3D space. Light manager provides an easy way to manage light sources.

2.1. Light Source Types

You can choose between 5 different light source type.


Point


Spot


Line


Polyline


Area

Different light sources are based on different characteristics and have different properties. The type of the light source determines its look on the rendered images.

- **Point**

Point lights do not have any direction, they emit rays from their position in all directions uniformly. You can model for example light bulbs by means of this light source type.

- **Spot**

Spot lights have a well-defined direction. It's typical light cone is based on the light limit and fall-off limit. In the cone defined by the light limit angle the light effects with full intensity. From the border of the light limit cone the intensity of decreases and reaches zero at the border of the cone defined by the fall-off angle. You can use it typically to model spot lamps and reflectors.

- **Line**

Line light sources emit light from a straight line in the 3D space. You can model for example fluorescent lamps by means of this light source type.

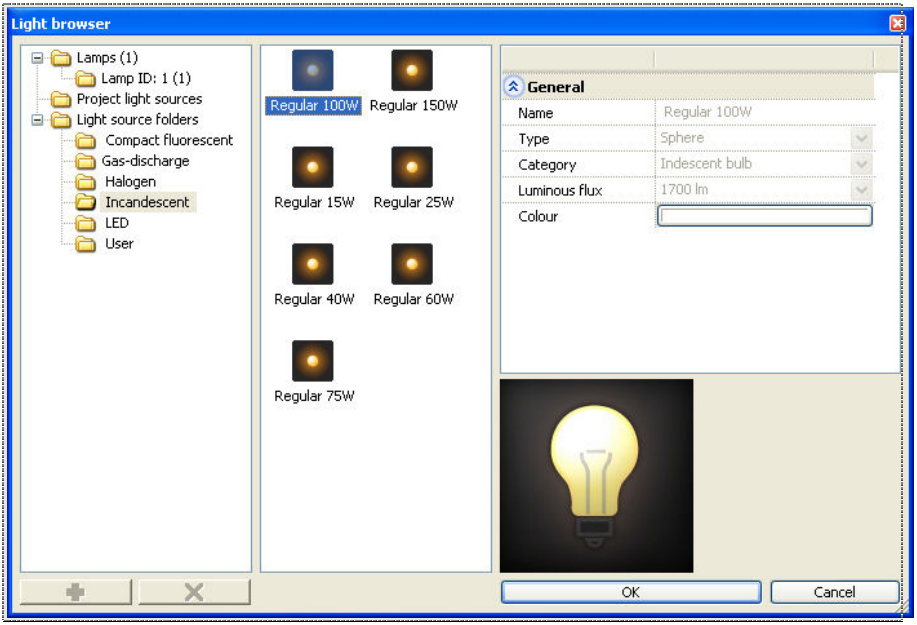
- **Polyline**

Polyline light source practically equals to a chain of line light sources. You can use it typically to model neon signs or hidden lights in suspended ceilings.

- **Area**

Area lights emit light from a surface in the space uniformly. You can model for example office lamps with more fluorescent tubes or surfaces lit with a color by means of this light source type.

2.2. Light browser

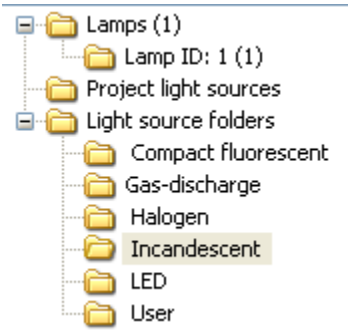


You can browse and edit light sources with Light manager. By means of this tool you can manage all available light sources or the lights effectively placed in the project.

Light manager has three main panels (from left to right): the categories, the light source list and the light source properties.

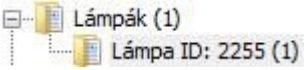
2.2.1. Folder panel

Folders consists of three main groups: Lamps, Project, Light source libraries



Lamps

The „Lamps” folder is available only if you have attached at least one light source to an object.



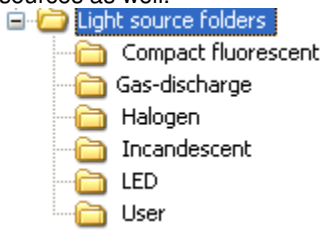
Under the „Lamps” folder appear the objects with one or more light sources attached to them. By clicking the name of the lamp, the light sources attached to it appear in the middle panel. You can detach the selected light source from the lamp with the Delete button at the bottom of the Folders panel.

Project light sources

You can find all of the light sources used in the project in the Project light sources folder. By clicking on the Project light sources folder the used light sources appear in the Light sources panel.

Light source folders

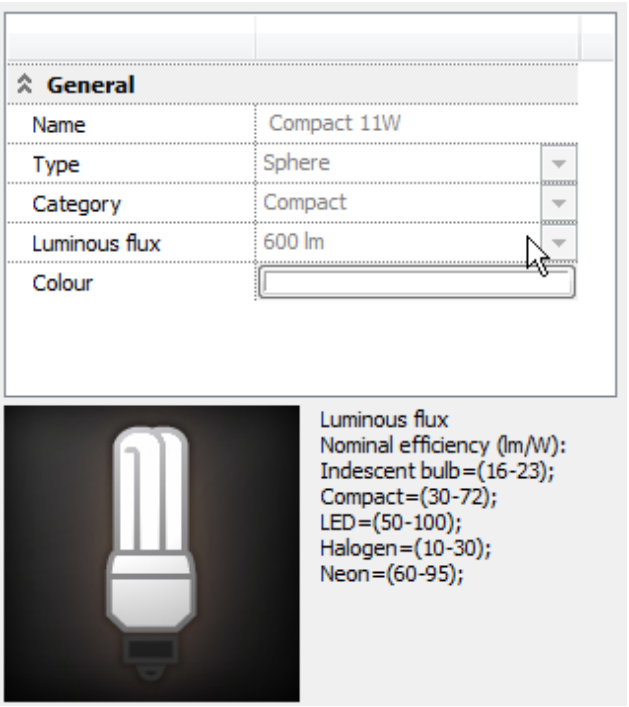
Light source folders consist of light sources which are available right after the program has been installed. Here you can add new folders or new light sources as well.



2.2.2. Light Sources panel

The Light Sources panel displays the light sources in the selected folder.

2.2.3. Light Source Properties



In the Light Source Properties panel you can view and edit the properties of the selected light source

Name

You can add a unique name to the light source. The names of the factory default light sources represent their types and power consumptions

Type

The type is related to the geometry of the light source. You can select between Point, Spot, Line, Polyline and Area

Category

Defining the category of the light source has no effect to the appearance of the light, you can use this setting for classification purposes only. You can choose between indescent bulb, compact, LED, Halogen and Neon.

indescent bulb

compact

LED

Halogen

Neon

Luminous flux

You can set the intensity of the light source in lumen

Color

You can set the color of the light source.

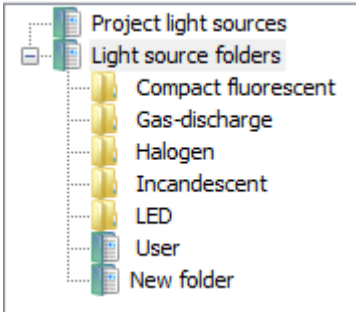
2.2.4. Creating a light source folder

You can create a light source in a User light source folder in the Light manager. The newly installed program contains folder called „User" that consists of some sample light source for further editing. You can modify the content of the user defined folders only. Factory default and user defined folders are represented by different icons.

Factory default light source folder

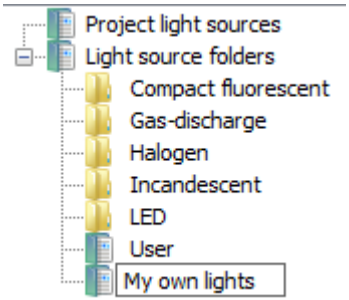
User defined light source folder

You can create your own user defined light source folder, just select the „Light source folders" and click on the  button. A new user defined folder called „New folder" will be created.



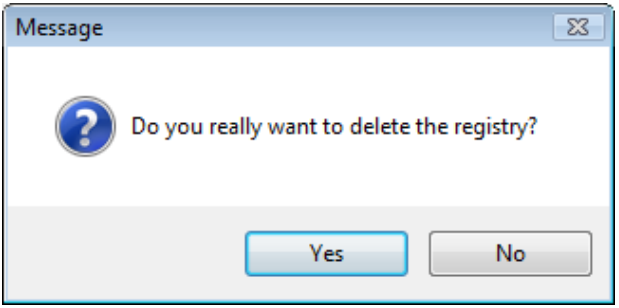
2.2.5. Renaming a light source folder

You can rename an user defined light source folder. First select it and then click on the name of the folder again, type the new name and press ENTER.



2.2.6. Deleting a light source folder

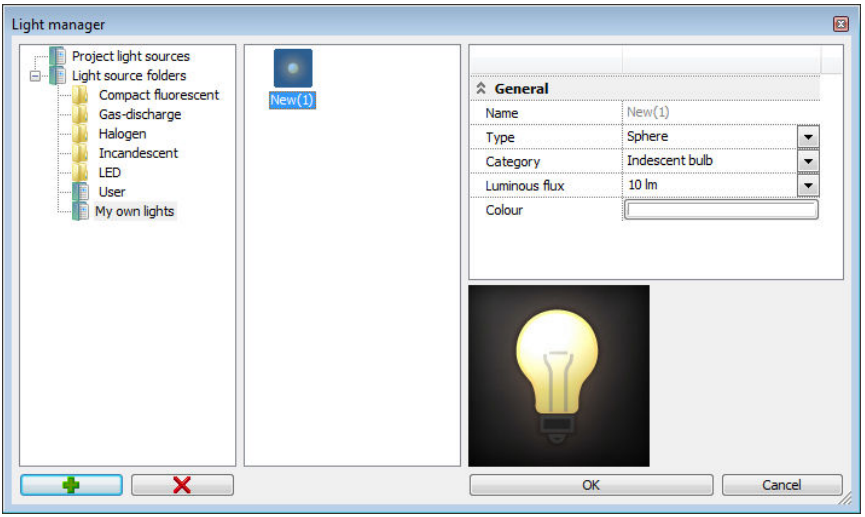
You can delete an user defined light source folder. First select it and then press the  button. If you confirm the appearing dialog box, the folder and its content will be deleted.



There is no way to restore the deleted folders and their contents so be careful when deleting light source folders.

2.2.7. Creating a light source

You can create a new light source in an user defined folder. First select the appropriate folder and press the  button. A new light source will be added to the folder.



Once the new light source is created, you can change its properties on the Properties panel.

2.2.8. Renaming a light source

You can rename an user defined light source. First select it and then click on the name of the light source again, type the new name and press ENTER.

2.2.9. Deleting a light source

You can delete an user defined light source. First select it and then press the  button.

2.3. Creating a lamp

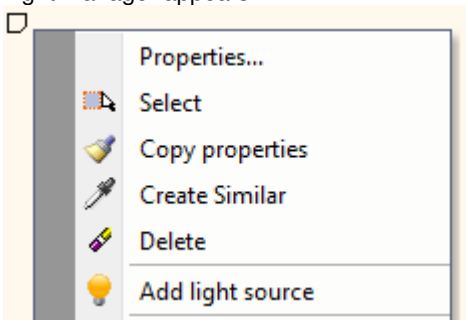
A so called lamp is composed of a library object and one or more light source attached to it. You can attach a light source only to a library object.

- **By Toolbox Command**

First select the *Light – Add light source* command form the Building group of the Toolbox, and then select a library object. Once an object is selected, the Light manager appears.

- **From the Popup menu**

You can attach a light source to a library object by selecting the Add light source command in its Popup menu as well. If you select this command, the Light manager appears.

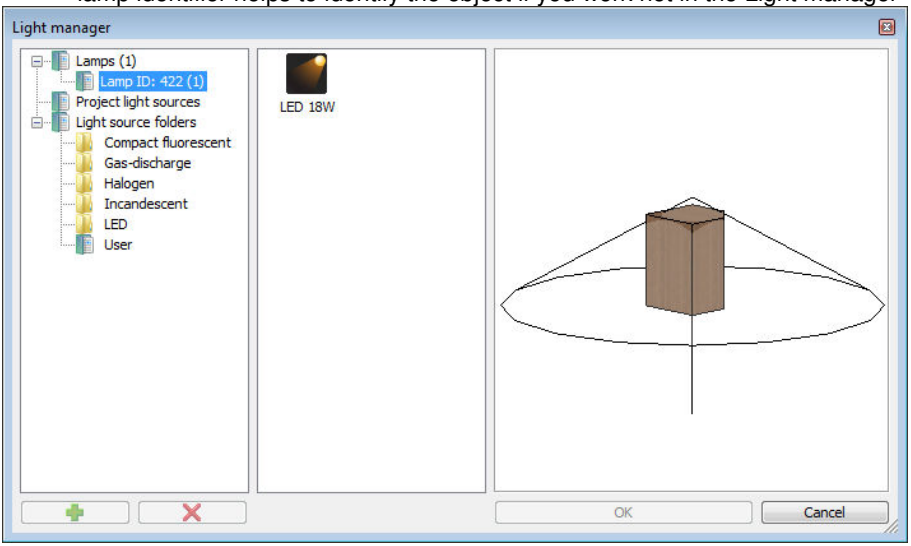


2.4. Managing lamps

You can manage lamps and light sources with ARCHLine.XP® even if there are a lot of them in the project.

2.4.1. Identification on the drawing

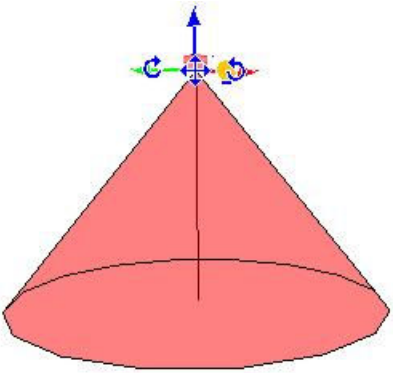
The program displays the lamps selected in the Lamps folder of the Light manager in the right panel of the manager and on the 2D drawing, too. The lamp identifier helps to identify the object if you work not in the Light manager



2.4.2. Selecting a light source of a lamp

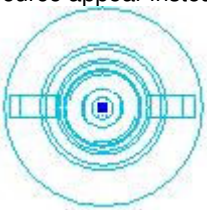
If you work in a 2D or 3D window and select a lamp with one or more light source attached to it, in addition to the default markers the light source markers appear.

Lamp selected on a 2D drawing

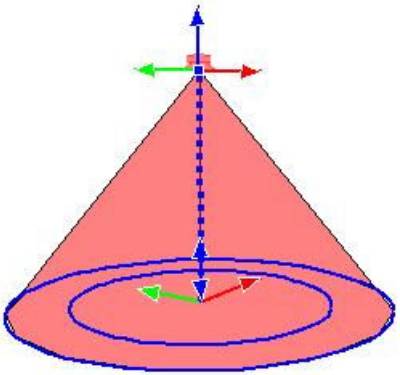


Lamp selected in the 3D model.

By clicking a light source marker some other markers related to the selected light source appear instead of the default library object markers.

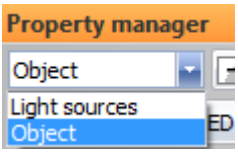


Light source selected on a 2D drawing

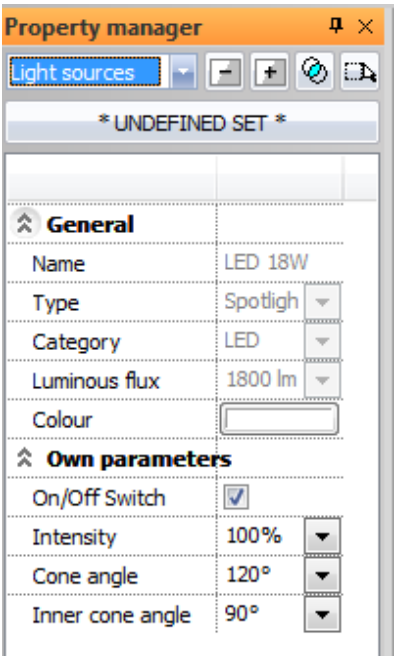


Lamp selected in the 3D model.

If an abject has light sources attached to it, you can view and edit their properties by means of the Property manager as well. To do this, select the lamp and choose the Light sources option from the drop-down list if the Property manager.

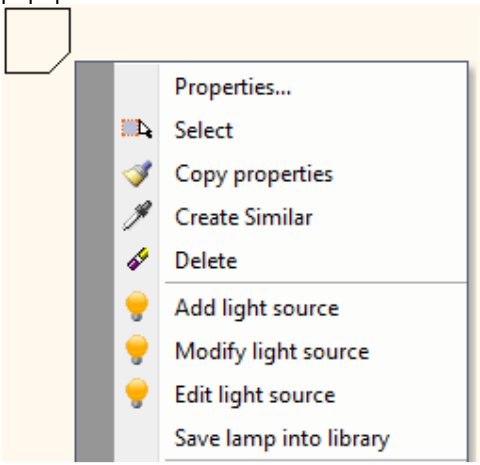


You can view and edit the properties of the selected light sources in the Property manager.



2.4.3. Editing lamps

If a lamp (an object with one or more light sources attached to it) is selected, you can edit it by selecting one of the light source editing commands from the popup menu.



Adding light source

You can attach a light source to a library object by selecting the Add light source command in its Popup menu. If you select this command, the Light manager appears.

Modify light source

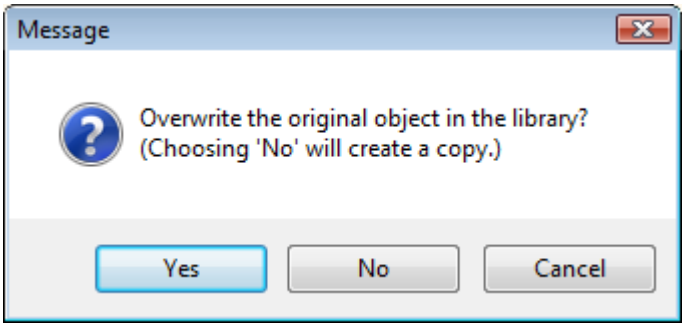
You can modify the properties of the selected light source by selecting the Modify light source command. See the details in the chapter Managing light sources.

Edit light source

You can edit the geometry of the light source by using its type-specific markers while the light source is selected.

Saving lamp into library

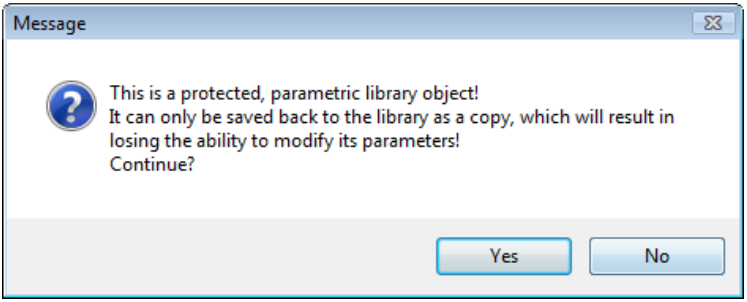
You can save the selected lamp into an object library. You have to decide whether to overwrite the original library object or to create a copy of it.



If you confirm the question, the original object will be overwritten, otherwise a new object will be created and you have to name it.

By pressing cancel at this point no object will be saved into the library.

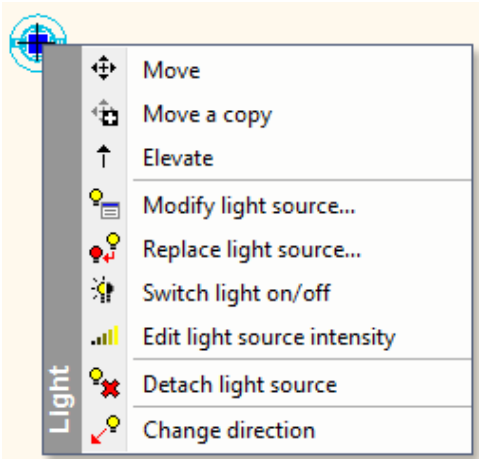
If you try to save an object in a write-only library like factory default objects in the Design Center, the following dialog appears:



If you confirm the question, you have to choose one of the user defined libraries to place the lamp into it, otherwise the command will be cancelled.

2.5. Editing light sources

Commands related to editing light sources can be found in the light source marker menus.



2.5.1. Move

You can move the light source relative to the object.

2.5.2. Move a copy

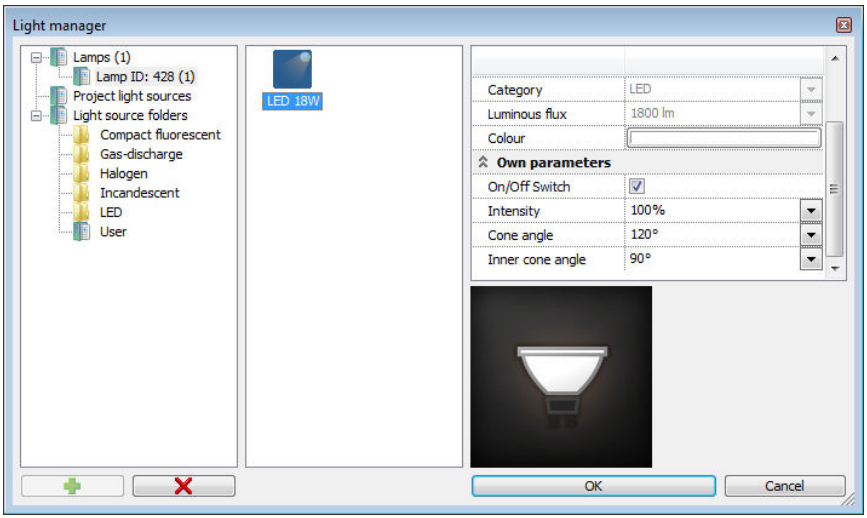
By selecting this command you can copy the current light source to a new position. The original light source remain unchanged.

2.5.3. Elevate

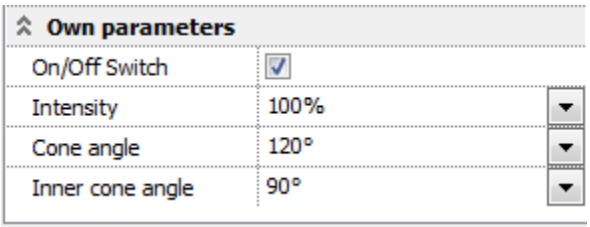
You can elevate the light source relative to the object.

2.5.4. Modify light source

By selecting this command you can modify the properties of the current light source in the Light manager



If you modify a single light source, the Lamps folder in the Light manager contains only one light source, even if more light sources are attached to the current object. You can view and edit the Own parameters below the general ones on the Properties panel.



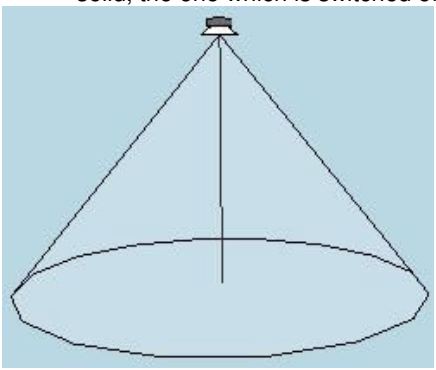
Own properties of spotlight

2.5.5. Replace light source

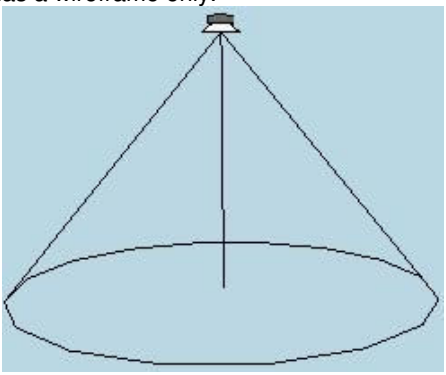
You can replace a light source with another by selecting this command. The original light source will be detached from the object. If the type of the original and the new light source is different, you have to place the light source again.

2.5.6. Switch light on/off

You can switch on or off any light source. You can control the result in the 3D window: the light source which is switched on has a semi-transparent light solid, the one which is switched off has a wireframe only.



Light source switched on



Light source switched off

2.5.7. Edit light source intensity

You can modify the intensity of the light source, relatively to the original lumen value, in percents. You can modify the intensity of the current instance of the given light source without affecting the other instances of this light source in the project

If you would like to change the intensity of all the instances of a given light source, modify the light source in the project folder of the Light manager.

2.5.8. Detach light source

You can detach the current instance of the light source from the object. This command has no effect to the other instances of this light source in the project

2.5.9. Changing direction

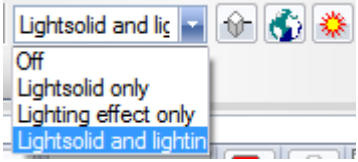
In case of some light types like spotlight the Change direction command appears in the marker menu if the current direction of the light is vertical. You can define another direction for the selected light source.

2.6. Representation of light sources

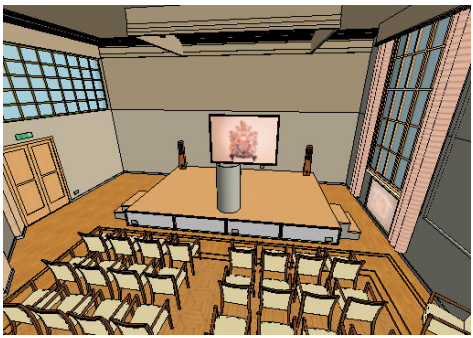
ARCHLine.XP® provides more light representations to support the design process in the early phase, even before rendering any photorealistic images.

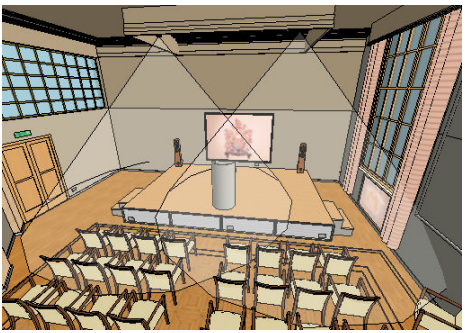
2.6.1. Light source representation menu

Select the appropriate light source representation in the Light source representation menu in the Sun setting toolbar.

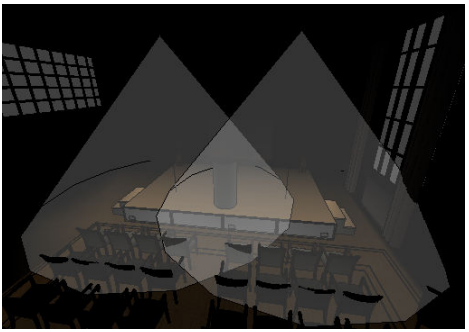


To study the different representations of the light sources switch on the Automatic light management button in the Sun setting toolbar.


light source representation switched off


Light solid only

Lighting effects only



Light solid and lighting effects

Off

If the light source representation is switched off, the program does not display any lighting effects or lightsolids except the sunlight. The automatic light management switch has no effect in this state.

Lightsolid only

If the light source representation is Lightsolid only, some shapes representing the lights appear in the model. The program does not display any lighting effects except the sunlight. The automatic light management switch has no effect in this state.

Lighting effects only

If the light source representation is Lighting effects only, some shapes representing the lights appear in the model. The program does not display any lightsolids. If the Automatic light management is switched on, the intensity of the sun- and ambient light will be reduced to make the lightning effects more intensive.

Lightsolid and lighting effects

If the light source representation is Lighting effects only, some shapes representing the lights appear in the model. The program displays the lightsolids, too. If the Automatic light management is switched on, the intensity of the sun- and ambient light will be reduced to make the lightning effects more intensive.

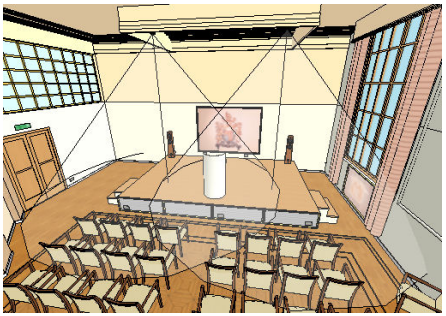
2.6.2. Automatic light management

You can switch on or off the Automatic light management by using the Automatic light management button in the Sun setting toolbar.

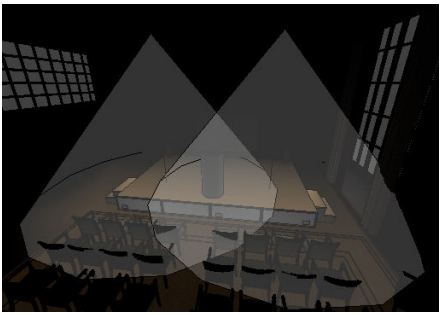
Automatic light management is disabled

Automatic light management is enabled

If the Automatic light management is switched on, the intensity of the sun- and ambient light will be reduced to make the lightning effects more intensive. Turn on the Automatic light management to study the effects of the light sources, use the switch in disabled state while creating or editing architectural elements or to study the model in daylight.



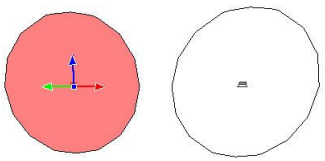
Automatic light management is disabled



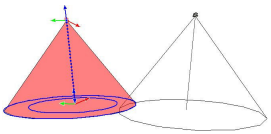
Automatic light management is enabled

2.6.3. Representation of light sources

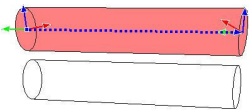
The different types of light sources are represented differently in the 3D model. The following table helps you to recognise the different types.



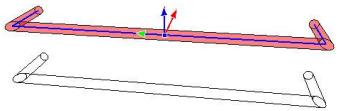
Point



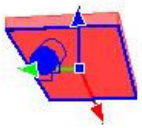
Spot



Line



Polyline



Area

2.6.4. Lights on the rendered images

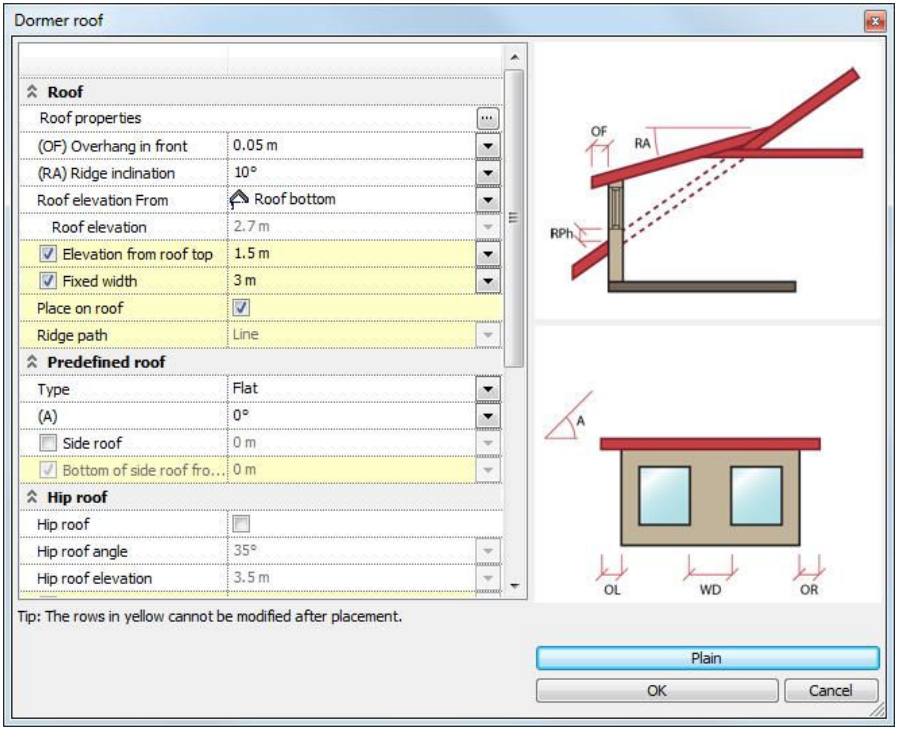
The real effect of lamps and light sources appears on the rendered images. You will get different results depending on the used settings. With

ARCHLine.XP® you can design the lighting of models and spaces in more versions, and you can show the result as photorealistic images.

3. Dormer roof

With the help of Dormer roof tool you can create detailed dormer roof structures; you don't need to design all the details only to set the parameters. After setting up the setting you can position the dormer roof element in one single step into the roof structure.

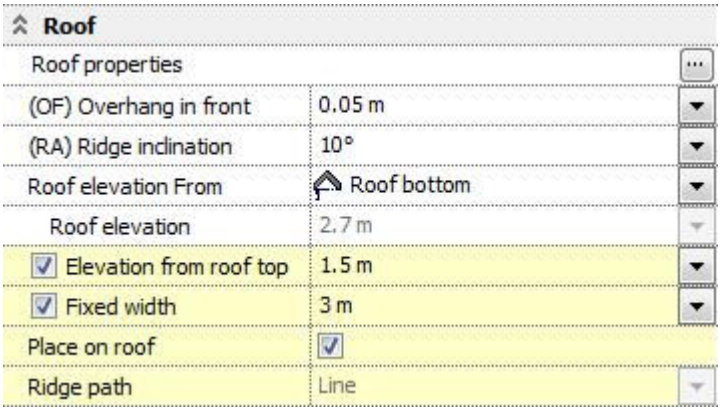
After starting the Dormer roof tool, you will see the following dialog window.



The backgrounds of some rows will be shown in yellow. The rows in yellow cannot be modified after placement.

3.1. Roof

In the roof section of the dormer roof setting window you can set the details of the roof structure, used as the roof part of the dormer roof.



3.1.1. Roof properties

You can set detailed settings for roof structure of dormer roof. You can use previously saved sets. To change settings please press the ... button at the end of the row.

3.1.2. (OF) Overhang in front

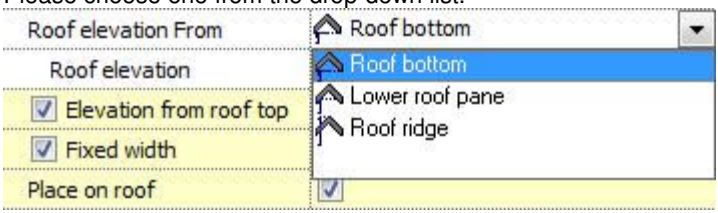
You can set the overhang of the roof at the front plane of dormer roof. Please type a value or choose one from the drop-down list.

3.1.3. (RA) Ridge Inclination

You can set the inclination of the ridge (or at some specific cases, the angle of roof plane). Please type a value or choose one from the drop-down list.

3.1.4. Roof elevation from:

Please choose one from the drop-down list.



3.1.5. Roof elevation

You can set the so called base height of the roof; this will specify its position in the 3D space. The value given will be used as defined by the setting previously made at “Roof elevation from” value.

3.1.6. Elevation from roof top

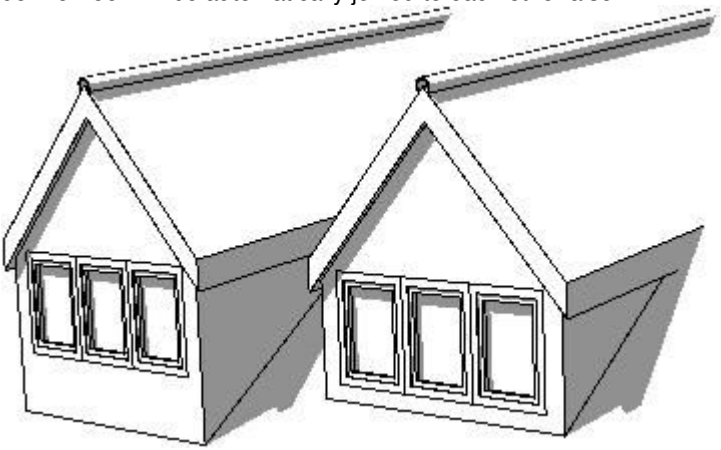
Enable the Elevation from roof top option to make the previously set roof elevation value measure from the top roof surface. When you disable this option the roof elevation value will be measured from the base level of the active floor.

3.1.7. Fixed width

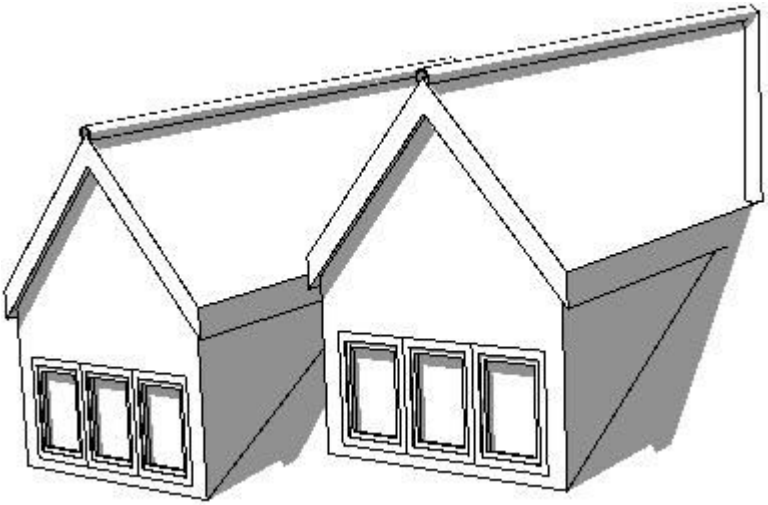
If you enable this option you will be able to give a value for the width of the dormer roof. This option can be used only for new dormer roofs and for predefined types. If you disable this option, you will be prompted to define the width graphically during the placement of dormer roof.

3.1.8. Place on roof

You can place dormer roof directly onto the surface of a selected roof plane. The option is available only when you enable and set the Fixed width option. The following examples are showing you the differences between enabled and disabled settings. If you enable this option the original roof and the dormer roof will be automatically joined to each other also.



Place on roof option disabled



Place on roof option enabled

3.1.9. Ridge path

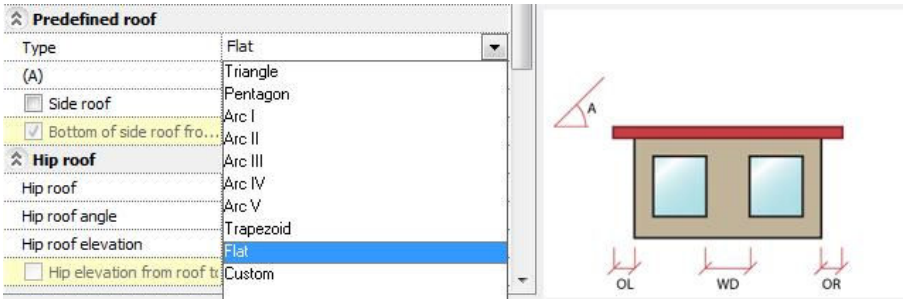
You can choose from the drop-down list, and based on the setting you made you can design the path of ridge during placement. This option is available only when you disable the Place on roof option.

3.2. Predefined roof

In the predefined roof section of dormer roof setting dialog window you can define the rules of how the dormer roof's roof structure will be projected into the original roof. You can see more or less setting if you choose one certain type of the predefined roof.

3.2.1. Type

You can set the type of dormer roof shape. Please choose one from the drop-down list or click on the picture you can see at the right bottom corner of the dialog window to change type.

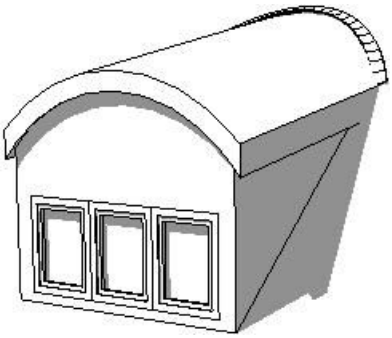


3.2.2. (A), (B), (E), (F), (V), (H) values

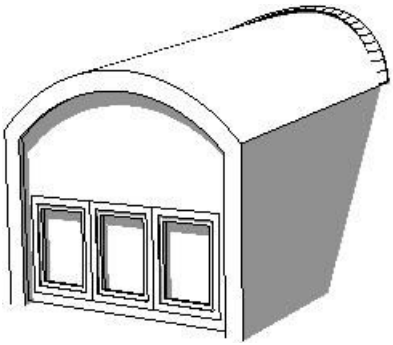
You can set the value, explained on the right side picture.

3.2.3. Side roof

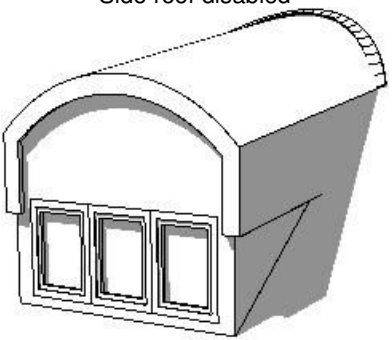
Set this option enabled to design side walls by roof planes. Also you can set the bottom position of the side roof plane.



Side roof disabled



Side roof enabled



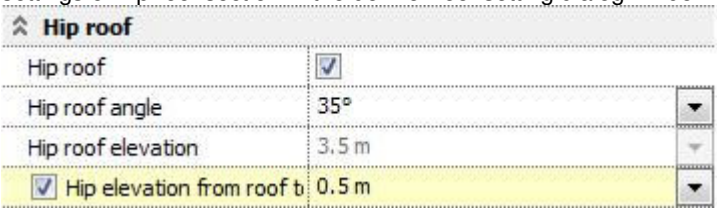
Side roof enabled and value is set

3.2.4. Bottom of side roof from roof top

You can enable this option if you previously enabled Side roof option. In this case you can define the distance between the original roof's top plane and the bottom of side roof plane. If you disable this option the value given will be measure from the base level of the active floor.

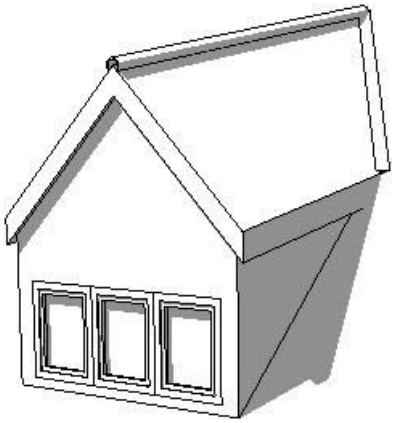
3.3. Hip roof

You can create hip roof in the roof structure of the dormer roof by using the settings of hip roof section in the dormer roof setting dialog window.

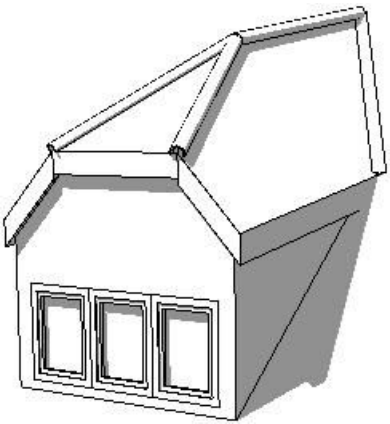


3.3.1. Hip roof

You can enable to create a hip roof, based on the settings of the hip roof section.



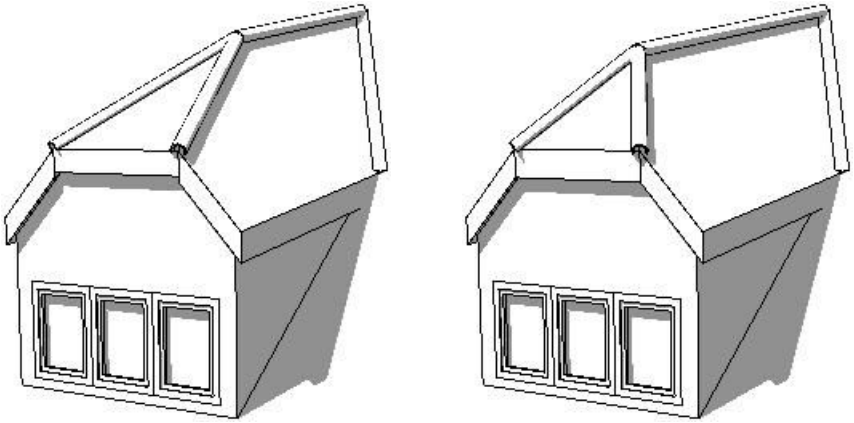
Dormer roof with hip roof



Dormer roof without hip roof

3.3.2. Hip roof angle

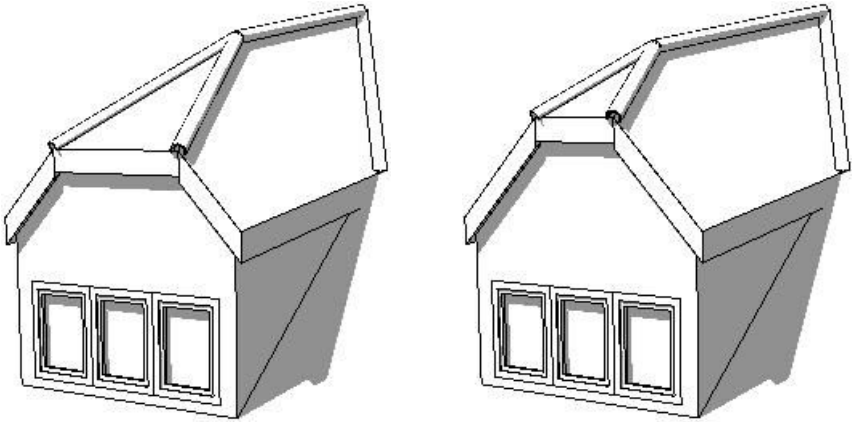
You can define the angle of hip roof.



Hip roof with different angle values

3.3.3. Hip roof elevation

You can set the elevation of the base height of the hip roof, measured from the base level of the active floor.



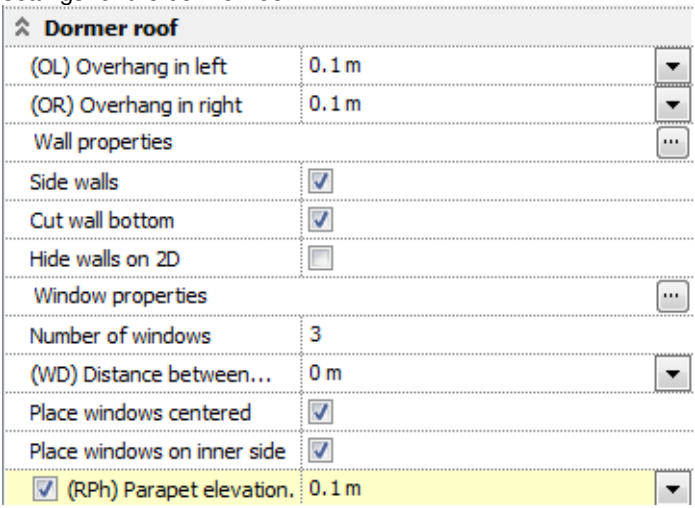
Hip roofs with different elevations

3.3.4. Hip roof elevation from roof top

If you enable this option the value given will be measure from the original roof's top plane. If you disable this option the Hip roof elevation value will be used.

3.4. Dormer roof

In this section of the dormer roof setting dialog window you can set detailed settings for the dormer roof.



3.4.1. (OL) Overhang in left

You can set the overhang of the roof at the left side of the dormer roof.

3.4.2. (OR) Overhang in right

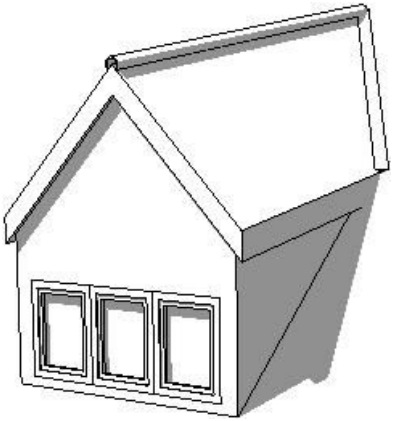
You can set the overhang of the roof at the right side of the dormer roof.

3.4.3. Wall properties

You can set the detailed settings of the side walls of the dormer roof. To change the settings please press  button at the end of the row.

3.4.4. Side walls

You can enable or disable side walls on 2D and in 3D.



Dormer roof with side walls

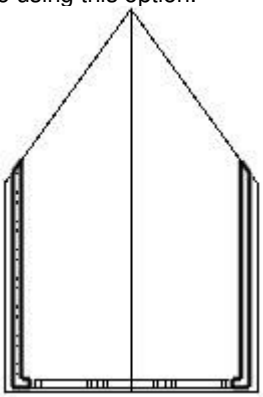
Dormer roof without side walls

3.4.5. Cut wall bottom

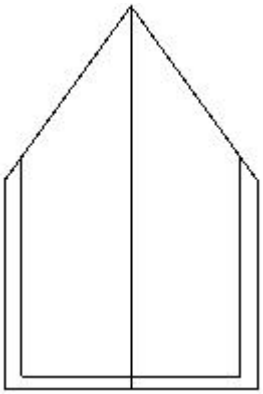
If you enable this option, the bottom of the side walls will be cut by the top plane of the original roof. Otherwise the settings of the wall properties will define the bottom of the wall.

3.4.6. Hide walls on 2D

Enable this option to hide wall symbols only on 2D. The 3D model won't change using this option.



Walls on 2D are visible



Walls on 2D are invisible

3.4.7. Window properties

You can change the setting of the windows of the dormer roof. To change the settings please press  button at the end of the row.

3.4.8. Number of windows

Here you can set the number of windows you want to place into the front wall of the dormer roof.

3.4.9. (WD) Distance between windows

You can set the distance between the windows of dormer roof.

3.4.10. Place windows centered

Enable this option to align windows into the middle of the dormer roof front wall. Otherwise the settings made in window properties dialog window will be used as the first distance of the first window on the left side.

3.4.11. Place windows on inner side

Enable this option to place the window to the inner or outer part of the dormer roof front wall

3.4.12. (RPh) Parapet elevation from roof top

If you enable this option you can set parapet elevation measured from the original roof's top plane. If you disable this option, the parapet elevation will be measured from the base level of the active floor. This option is available only when you create a new dormer roof, and if you previously enabled Place on roof option.

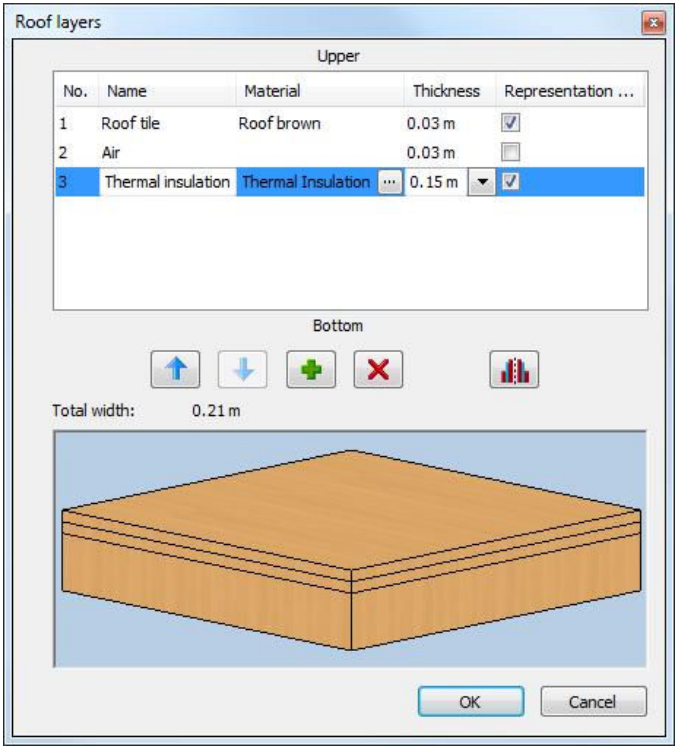
4. Roof improvements

There are new possibilities when designing a roof structure. You can create more detailed and complex roof structures.

4.1. Roof layers

You can add layers to the roof structure. Please choose Roof geometry page in the left side of the Roof properties dialog window. Click on Layers button to define additional layers in the roof structure. 

In Roof layers dialog window you can define additional layers to a roof structure or remove existing ones.



4.1.1. Layer list

At the top of the Roof layers dialog window you can see the layer list ordered from top to bottom as the top and bottom layers of the roof structure. In layer list you can check and edit roof layers.

Layer number

The No. column shows the number of each layer.

Name

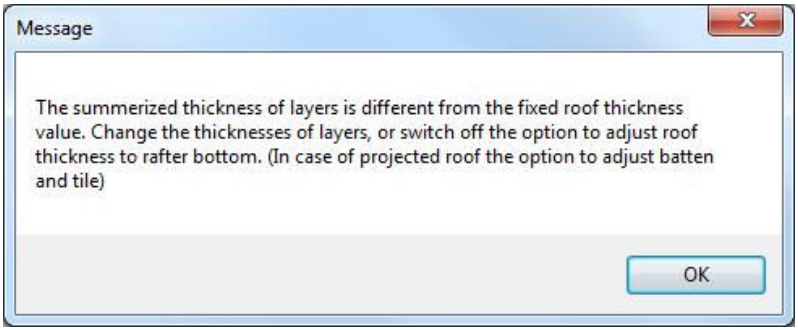
The Name column shows the given name of each layer. You can modify these names. Please click on one name to retype it.

Material

In Material column you can change one layer's material. The given material will be represented on sections and in 3D views.

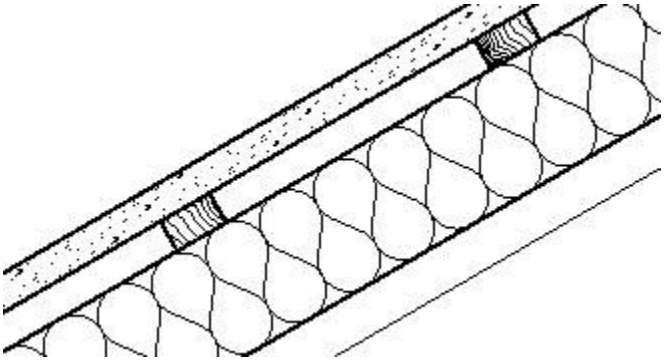
Thickness

In Thickness column you can change the thickness of each layer. If you already set adjustments for roof previously and this affects the roof layers, you may see the following message when pressing OK.



4.1.1.1. Representation in 3D

Representation in 3D option makes each layer visible or invisible in 3D and on section views. You can use it for layers such as air / ventilation.



4.1.2. Editing roof layers

In Roof layers dialog window you can change the order of layers, add new layers or remove existing ones.

Move layer up

You can change the order of the roof layer list by selecting one layer and pushing Move layer up if it is possible.

Move layer down

You can change the order of the roof layer list by selecting one layer and pushing Move layer down if it is possible.

Add layer

You can add new layer to the layers of the roof.

Remove layer

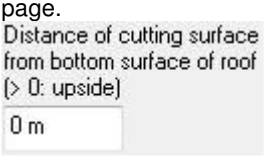
You can remove the selected layer from the roof layers.

Mirror layers

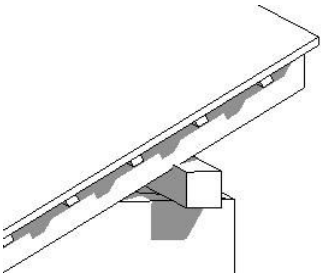
You can mirror the complete order of the layers of the roof.

4.2. Distance of cutting surface

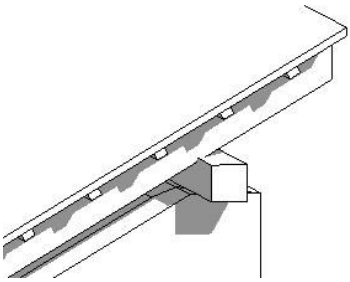
The software is able to cut the walls by the bottom surface of the roof plane. You can set the distance measured from the bottom roof plane surface by changing the value in the Roof properties dialog window's Projections and cut page.



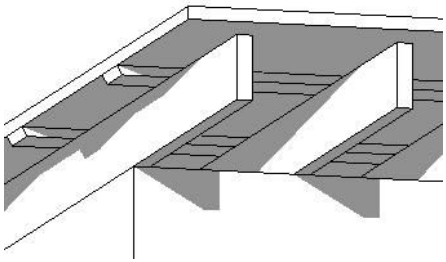
If you keep the value of Distance of cutting surface from bottom surface of roof (>0: upside) unchanged, the walls will be cut by the bottom roof plane surface. If you set a value that is different from zero, then the software will reposition the cutting surface measuring the given value from the roof bottom surface.



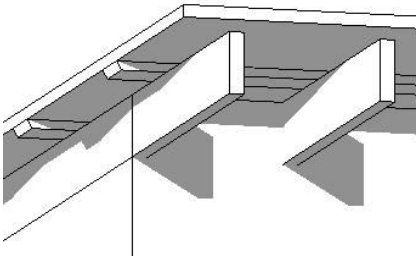
Distance of cutting surface is 0m



Distance of cutting surface is -0.1m



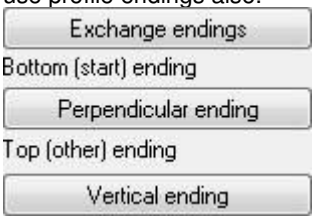
Distance of cutting surface is 0m



Distance of cutting surface is 0,15m

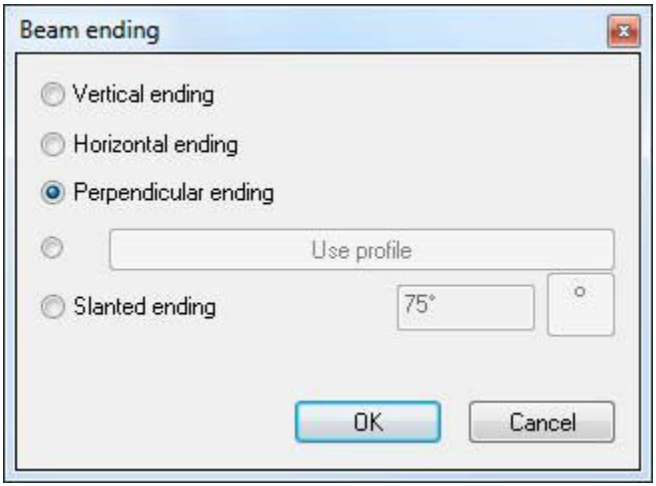
4.3. Ending of rafter

On the Rafter page of Roof properties dialog window you can change the rafter endings. You can set bottom and top endings one by one, and you can use profile endings also.

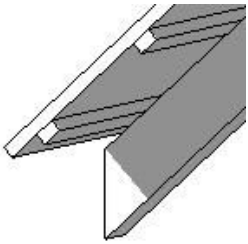


Bottom (start) ending

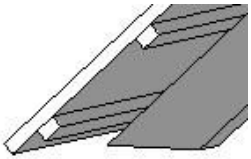
When you click to change Bottom (start) ending, you will see the following dialog window.



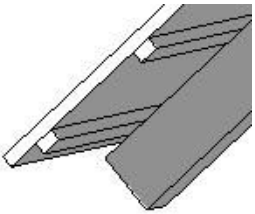
You can choose from a list of ending types and you can set the desired rafter ending.



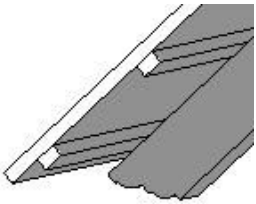
Vertical ending



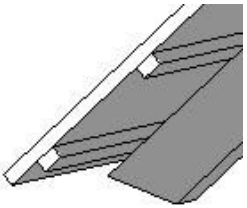
Horizontal ending



Perpendicular ending



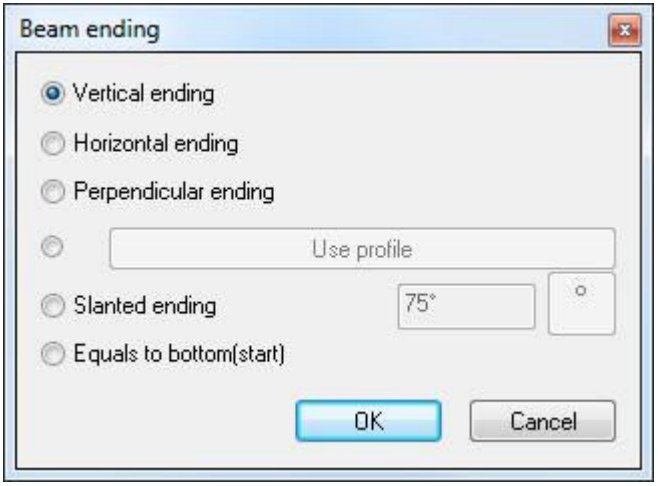
Profile ending



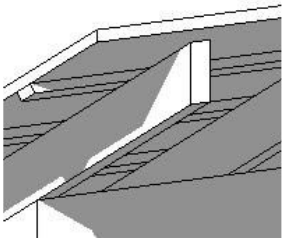
Slanted ending

Top (other) ending

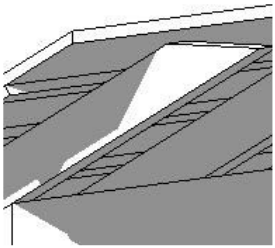
When you click to change Top (other) ending, you will see the following dialog window.



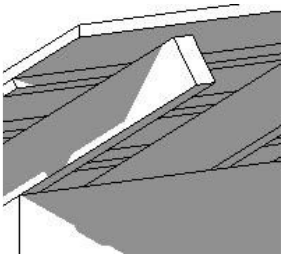
You can choose from a list of ending types and you can set the desired rafter ending. You will find these options useful when designing mono-pitch roof shapes. By using the Equals to bottom (start) option you can make both endings similar in one single step.



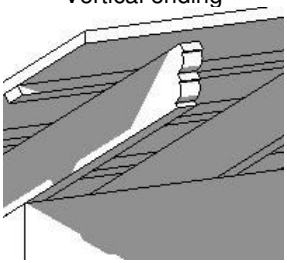
Vertical ending



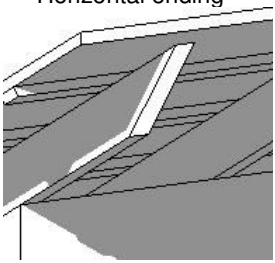
Horizontal ending



Perpendicular ending



Profile ending



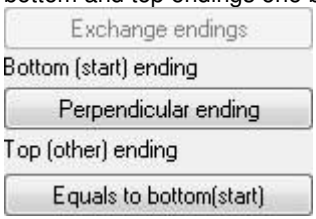
Slanted ending

Exchange endings

If you defined different rafter endings you have the possibility to exchange them in one single step by clicking on Exchange endings button.

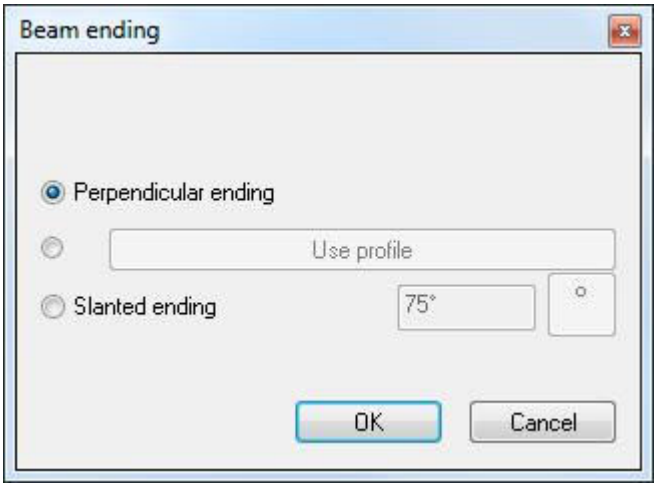
4.4. Eaves purlin, Middle purlin, Ridge board ending

On the Eaves purlin, Middle purlin and Batten pages of Roof properties dialog window you can change these structural elements' endings. You can set bottom and top endings one by one, and you can use profile endings also.

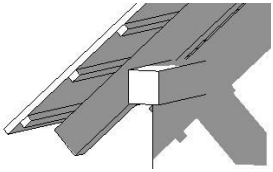


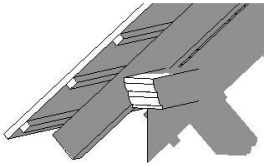
Bottom (start) ending

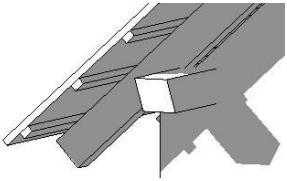
When you click to change Bottom (start) ending, you will see the following dialog window.



You can choose from a list of ending types and you can set the desired one.

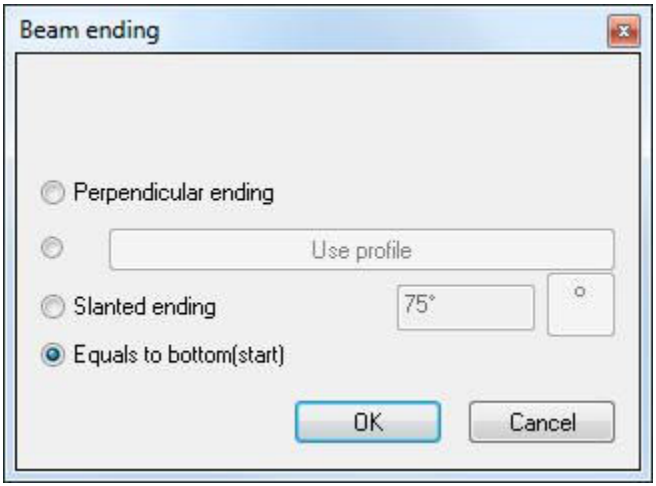

Perpendicular ending


Profile ending


Slanted ending

Top (other) ending

When you click to change Top (other) ending, you will see the following dialog window.



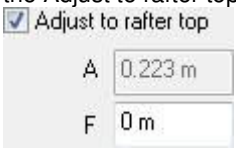
You can choose from a list of ending types and you can set the desired ending. By using the Equals to bottom (start) option you can make both endings similar in one single step.

Exchange endings

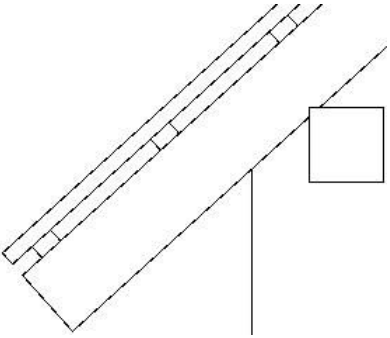
If you defined different endings you have the possibility to exchange them in one single step by clicking on Exchange endings button.

Adjust batten

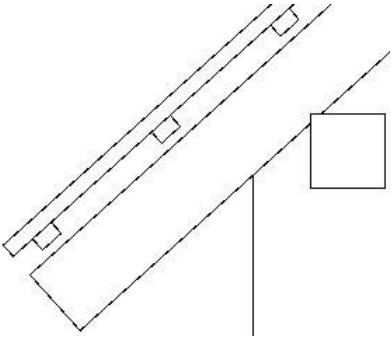
On Batten page of the Roof properties dialog window you can change the distance of batten from the top surface of rafter. For this, you need to enable the Adjust to rafter top option.



Defining the F value you can set the distance between the batten bottom surface and the rafter top surface.



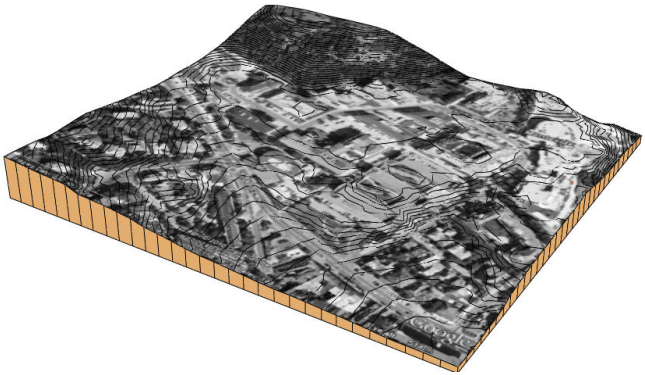
F = 0m



F > 0m

5. Terrain news

5.1. Terrain import from Google Earth

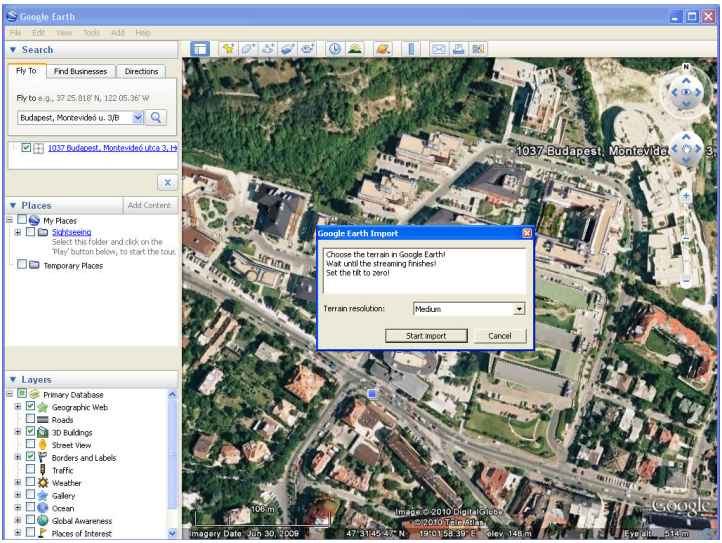


With ARCHLine.XP® it is possible to import terrain from Google Earth.

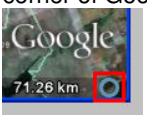
For using of this function you need to have Google Earth 4 or newer version installed on your computer. It can be downloaded and installed for free from http://earth.google.com/. Also, for Google Earth you need a live internet connection.

Terrain import from Google Earth in ARCHLine.XP® works as follows:

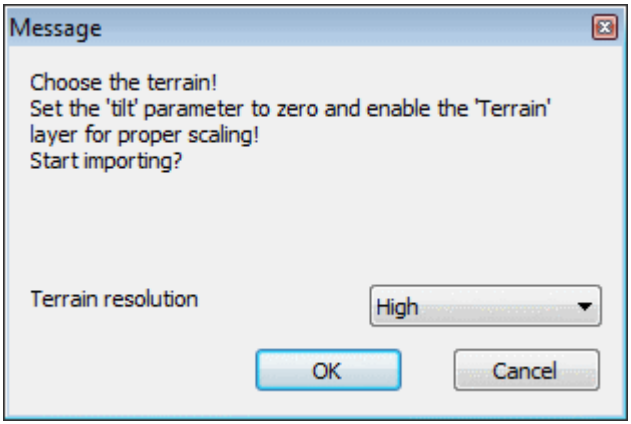
- Click *Building menu – Terrain – Import from Google Earth* command. ARCHLine.XP® starts Google Earth application. Before importing a small dialog appears with some instructions. Click Yes button to start the import or click No to cancel it.

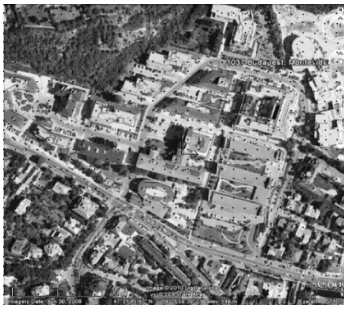


- Navigate to the desired position in Google Earth. Use mouse scroll for zooming, left mouse button for panning the map or use the search field to look for an exact address. You can find further information about using Google Earth in the help or on http://earth.google.com/intl/hu/userguide/v5/ web page.
- Wait until the completion of downloading the whole terrain part. (Downloading of a terrain part is completed when the small ring icon on the bottom-right corner of Google Earth window doesn't spin.)

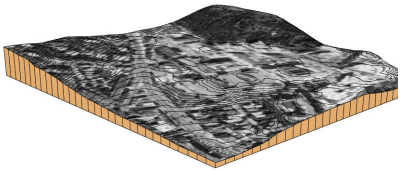


- Only maps in top view can be processed correctly in ARCHLine.XP®. In case of tilted map view please use the SHIFT+UP arrow key combination to achieve the correct view.
- Before importing, set the desired terrain resolution in the appearing message box (low: 24x24, medium: 32x32, high: 64x64 terrain points) and then click **OK** for starting the import. Please wait until ARCHLine.XP® has finished downloading the map and creating of terrain.





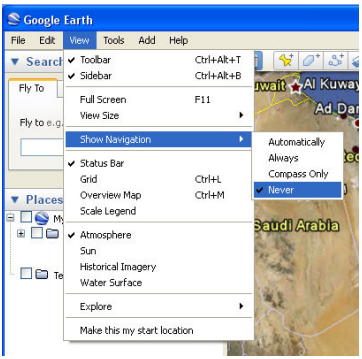
Downloaded map on the floor-plan



in 3D

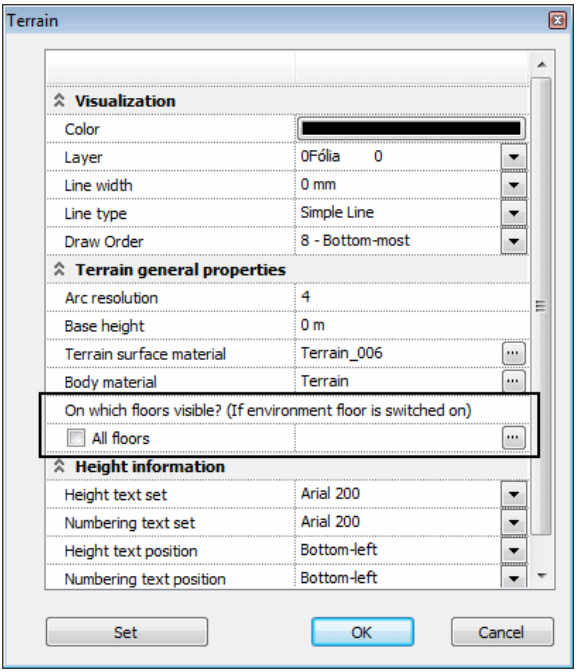
The downloaded terrain appears on the floor plan and in 3D and then it works like other terrains.

ARCHLine.XP® places exactly the same image what you see in Google Earth on the surface of the terrain. If you find disturbing navigation buttons or texts on the surface of the terrain, you can eliminate those by switches in the View menu of Google Earth.

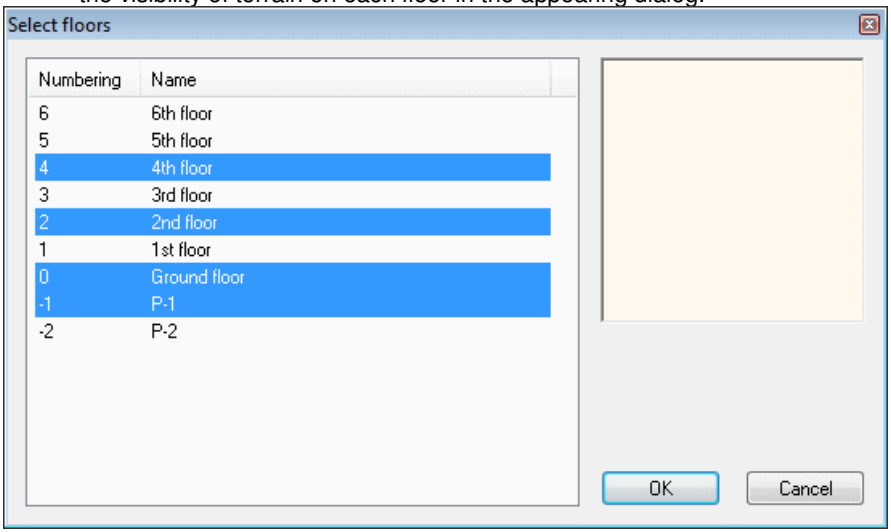


5.2. Visibility on different floors

It is possible to define the visibility of terrain on the floor plan for each floor. This setting is available in the **Terrain** dialog by clicking **Modify…** in the shortcut menu.

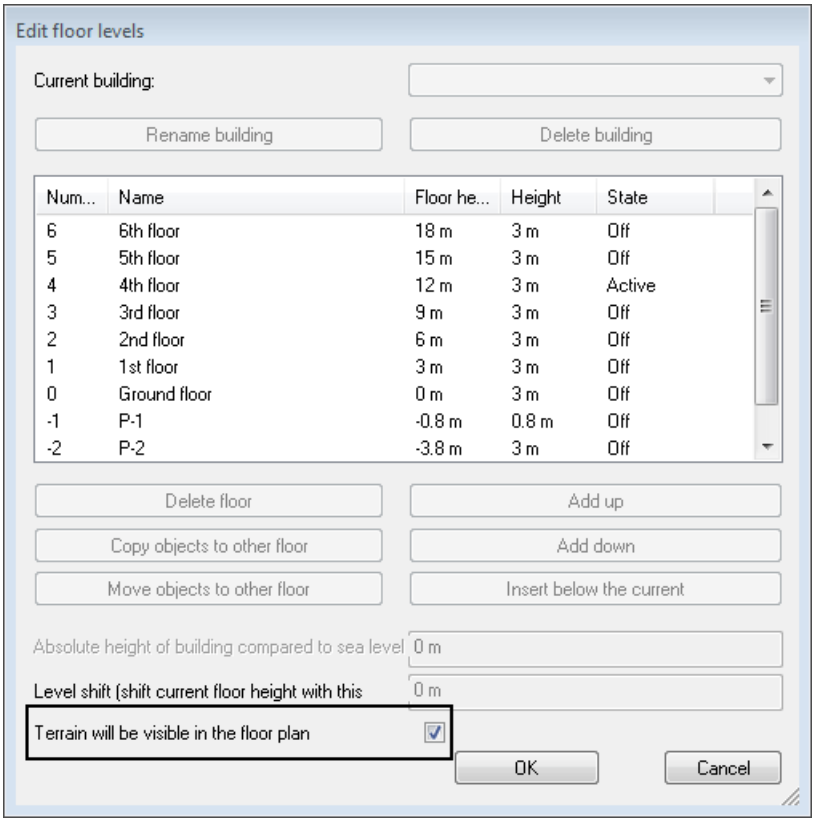


By switching the **All floors** checkbox on, terrain will be represented on each floor. By switching this checkbox off, you can use the ellipsis button to specify the visibility of terrain on each floor in the appearing dialog.



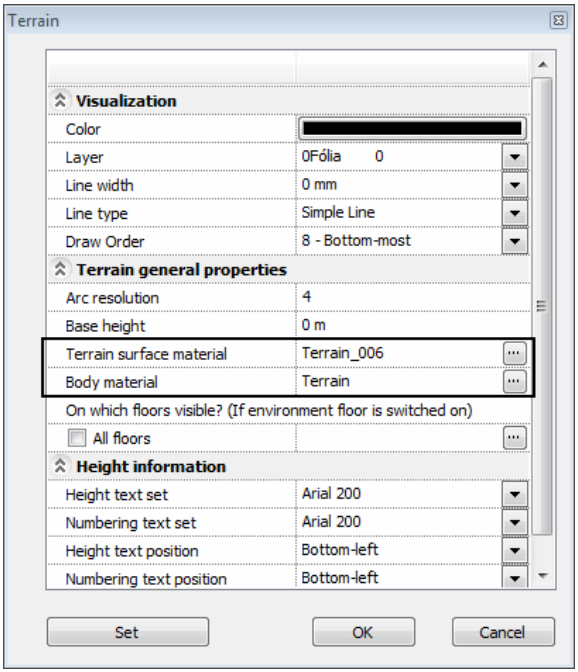
Use CTRL/SHIFT keys and mouse click for floor selecting/deselecting.

When you open a file for print layout and click **Floor**, the status of **Terrain will be visible in the floor plan** checkbox defines the visibility of terrain on the plot layout.



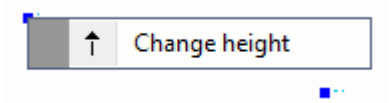
Terrain materials

In the Terrain properties dialog it is possible to define two materials for the terrain, one for the terrain surface and another one for the terrain body.

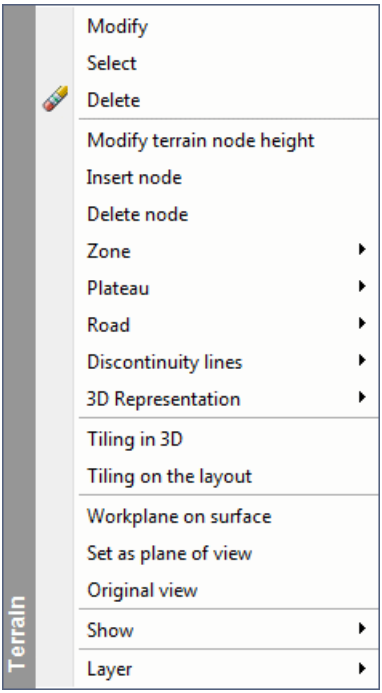


5.3. Terrain 3D commands

Zone, plateau, road and discontinuity line definition and modification is available in 3D. When you use a terrain command in 3D, there is no automatic switch to the floor plan.
Modify and **Selec**t shortcut menu commands are available in 3D window, too.
Change height marker command is available for changing the height of each terrain point in 2D/3D windows.

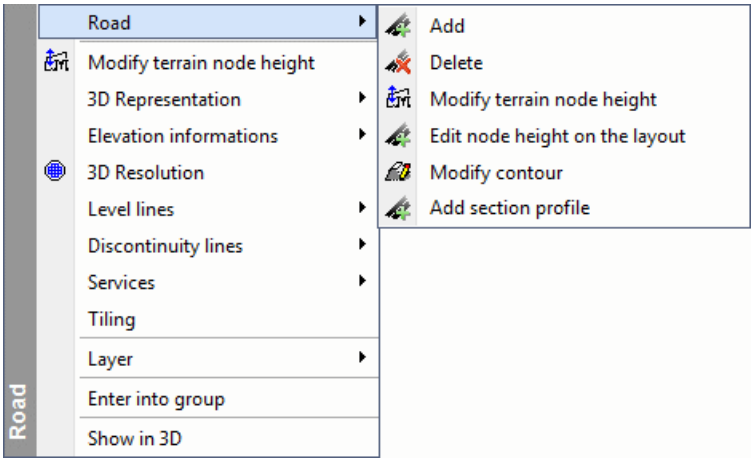


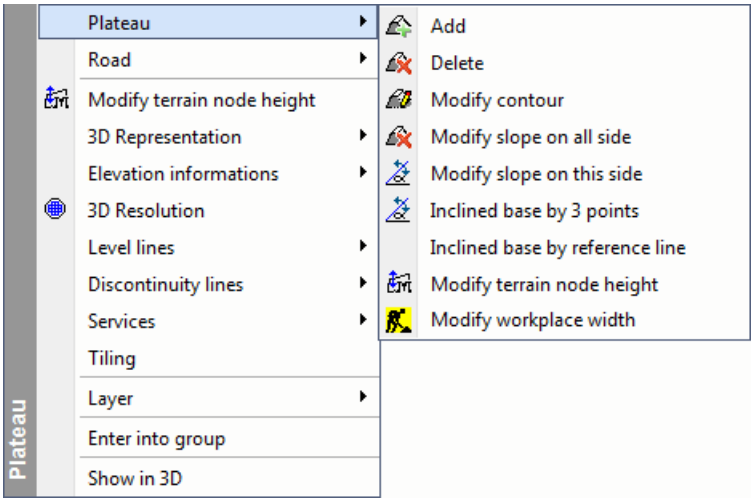
Terrain shortcut commands are rearranged:

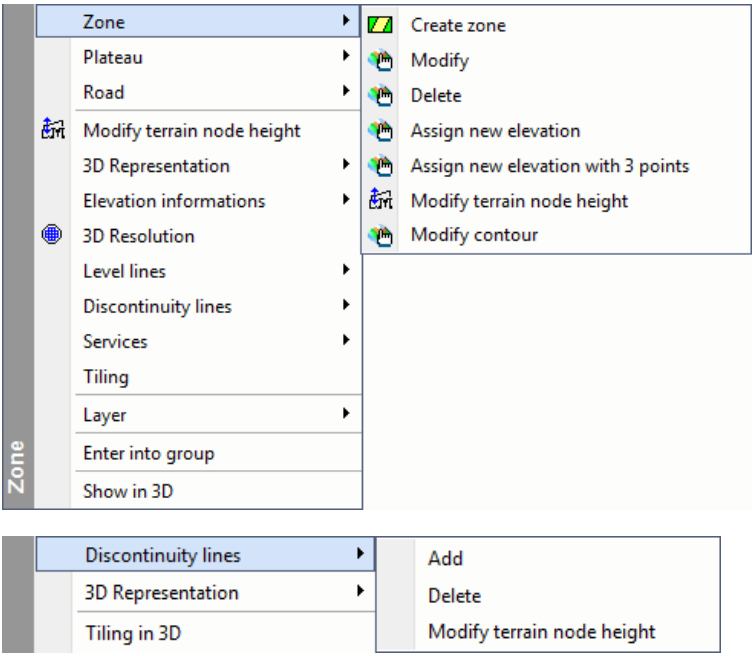


Terrain subtype recognition

When going over the terrain with the mouse cursor, terrain subtypes (road, plateau, and zone and discontinuity line) are recognized automatically in 2D/3D windows. Depending on the recognized terrain subtype, the appearing shortcut menu includes the appropriate commands.


Road
Road
Modify terrain node height
3D Representation
Elevation informations
3D Resolution
Level lines
Discontinuity lines
Services
Tiling
Layer
Enter into group
Show in 3D
Add
Delete
Modify terrain node height
Edit node height on the layout
Modify contour
Add section profile

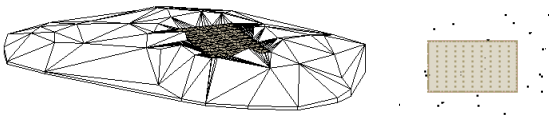

Plateau
Plateau
Road
Modify terrain node height
3D Representation
Elevation informations
3D Resolution
Level lines
Discontinuity lines
Services
Tiling
Layer
Enter into group
Show in 3D
Add
Delete
Modify contour
Modify slope on all side
Modify slope on this side
Inclined base by 3 points
Inclined base by reference line
Modify terrain node height
Modify workplace width



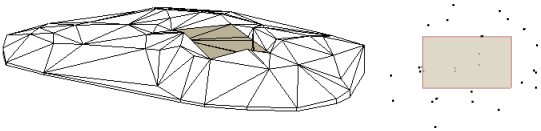
Terrain zone

When creating a zone, instead of adding new points to the terrain inside the contour of the zone, zone contour is added to the terrain as discontinuity line. Compared to the previous versions, this enables a better zone representation, as especially at the border of the zone.

Previous zone representation:

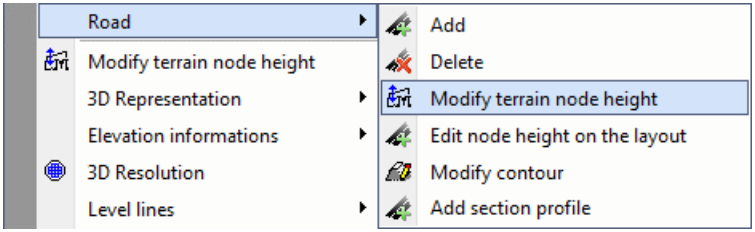


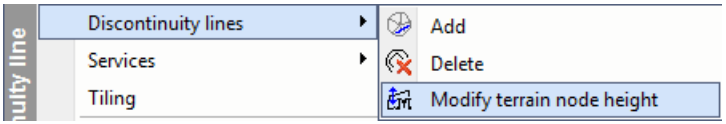
New zone representation:

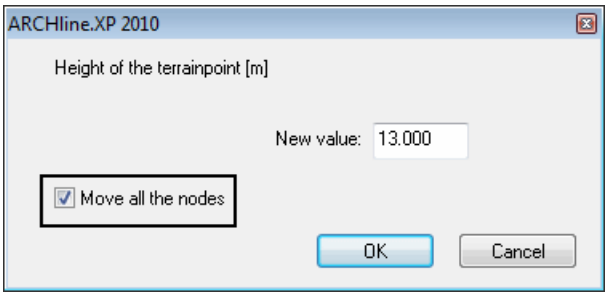


5.4. Vertical shift of road/discontinuity line

When setting node height of a road/discontinuity line, modification of the height of all points can be executed by switching the **Move all the nodes** option on.



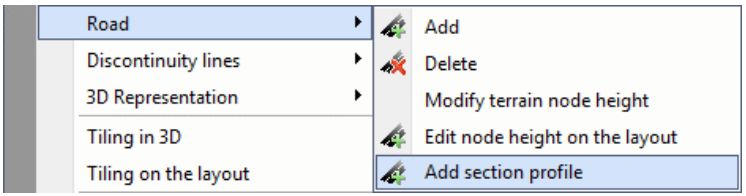




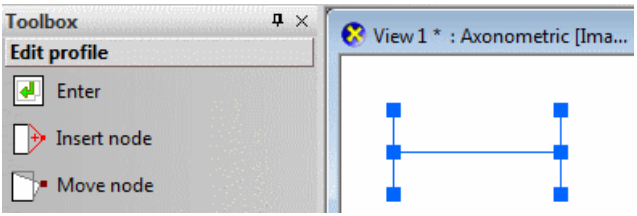
In that case all points are shifted vertically by the relative change of height of the selected road node.

5.5. Profile section definition of road

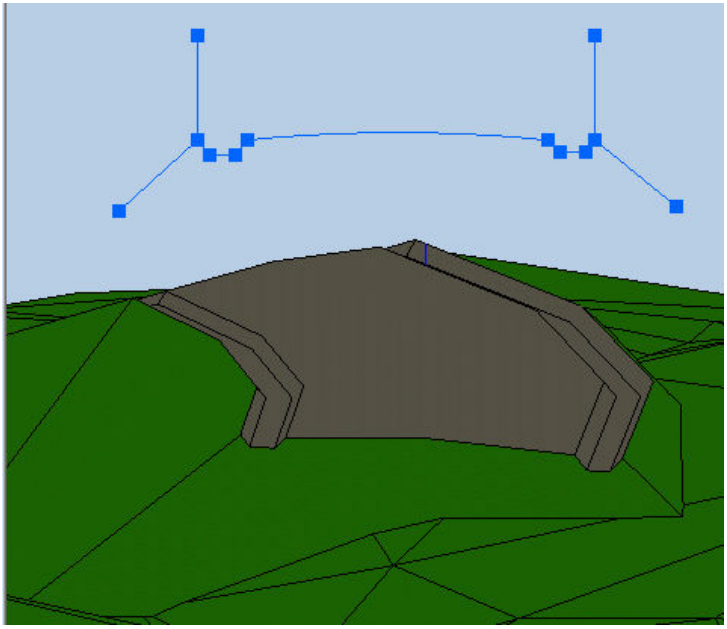
Section profile can be added to roads by the **Add section profile** command.



Using this command you can temporarily place the section profile on the screen and then you can use the **Edit profile** commands to modify road section. The road cuts out the surrounding terrain according to the section profile.

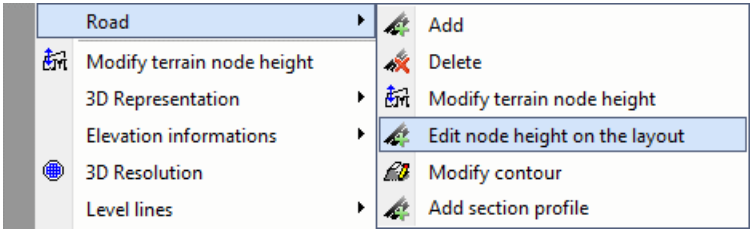


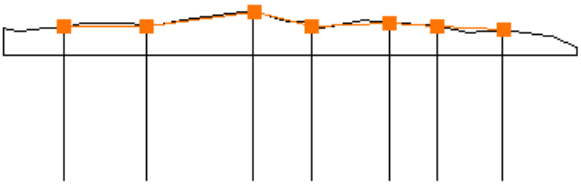
Six nodes appear by default as an H letter. The upper and lower nodes define the slant angle above and below the road surface, respectively. You can only move these nodes. The line between the middle two nodes defines the profile of the road top surface. Here you can add/delete nodes.



5.6. Road node height edition on layout

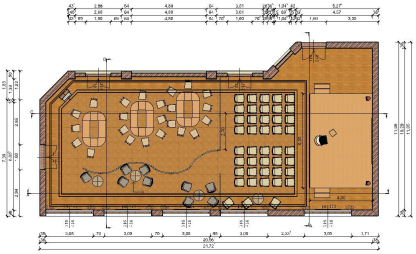
Using the **Edit node height on the layout** command you can place the layout of the vertical section of the road on the screen and then you can use the **Edit profile** commands to modify nodes.



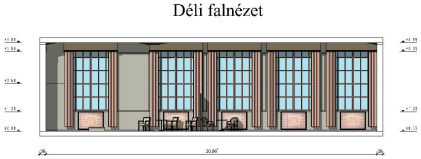


6. Snapshot

Snapshot is a raster image that is taken in a 3D window.
Snapshot enables you to create attractive coloured documentation of elevation views and floor plans.
The Snapshot function helps you to move and calibrate a raster image into the 2D floor plan exactly in the right place and size.
It is a special raster images that keeps the 3D model vertex points so you can precisely measure distances and angles on that 3D view raster image.



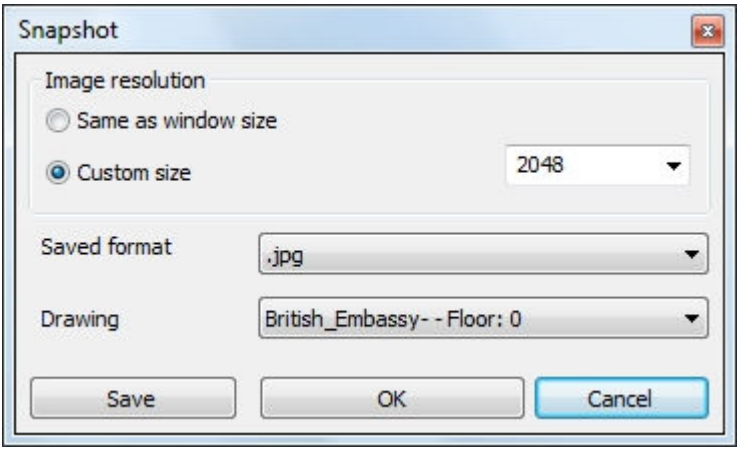
Floor plan with Snapshot



Wall view

6.1. How to use the Snapshot?

You can start the command from Edit menu when a 3D window is active. It displays the following dialog.



6.1.1. Snapshot dialog

Resolution

The raster image resolution defines the document quality. You can choose as:

- **Same as window size**

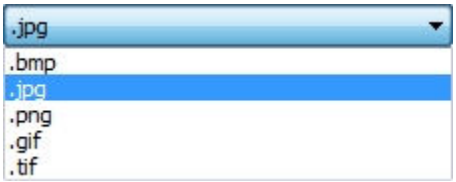
The software captures a screen shot of your 3D active window to an image with the same resolution.

- **Custom size**

Choosing the custom size option you can select a predefined resolution from the drop-down list at the right, as the resolution for the image's largest size. Choose a larger value to set the final result more detailed. Using larger values will make the project file size growing larger also. Please choose the size of the snapshot carefully, as you want your project not to grow too large, because handling larger projects could make workflow slower on some machines. Otherwise if you choose a small resolution, the final image may be pixelated which can make it less useful. Please choose from the drop-down list.

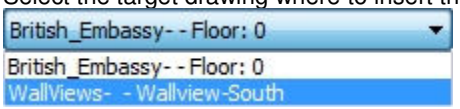
Saved format

You can choose the snapshot image's file format from the drop-down list. This file format will be used during the process of the snapshot. Different file formats store images with dfferent file size and quality conditions. Please select the desired file format.



Target drawing

Select the target drawing where to insert the snapshot image.



Save

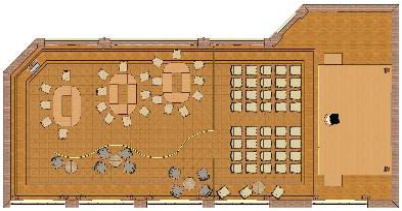
Use the *Save* button to save the snapshot image into an image file on your harddrive instead of a target drawing. Please specify the path and name of the file in the appearing *Save as...* dialog window.

6.1.2. How to make a snapshot

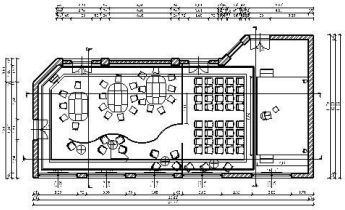
To create a snapshot of the 3D content you need to choose the 3D window that you want to use as the theme of the snapshot. (For example: a top view of the 3D model).

As a second step you need to start *Edit menu – Snapshot tool*. In the appearing dialog window set the resolution for the snapshot image, set its format and please set the target drawing from the drop-down menu as well. When finished please press the OK button.

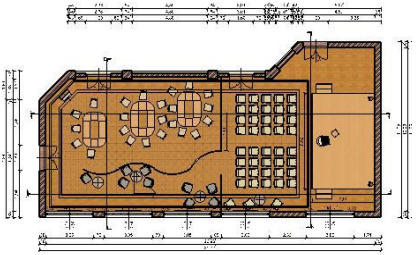
The software will automatically create the snapshot image of the previously set 3D content, and it will be placed soon into the selected target drawing. The result of snapshot will be scaled.



Top view of the 3D model (theme of the snapshot)



Original 2D drawing (the drawing, which is set as the target)



Result - 2D drawing and Snapshot combined

6.1.3. Snapshot and object snap

Snapshot is able to copy and paste any 3D view into an other 2D drawing in correct scaling, and it is also able to keep the reference points of the original 3D view. This will happen automatically when using the Snapshot tool.

This way you can use snapshots as individual drawings too. The software will recognize the reference points of the snapshot, so for example you are able to place dimension on it.

Snapshot with dimensions

6.1.4. Contour of a snapshot

Contours of a snapshot equal to the contours of the original 3D view.

This feature is great when you want to place some specific drawing or 2D group behind the snapshot.

2D group in front of a snapshot

2D group behind a snapshot

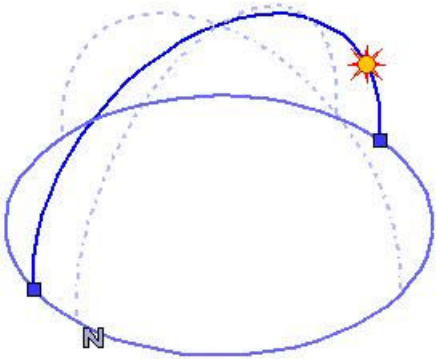
7. Heliodon

Heliodon is a tool that creates the appropriate geometrical relationship between an architectural scale model and a representation of the sun. By allowing adjustment for solar declination (season), the earth's rotation (time of day), and site location (latitude) a heliodon can simulate sunlight penetration and shading for any combination of site location and time. The result is a useful representation of solar patterns for clear sky conditions.
Heliodon provides an effective tool for the visualization and calculation of solar effects at the window, building, or site scale.
See more http://arch.ced.berkeley.edu/resources/bldgsci/bsl/heliodon.html

7.1. Heliodon tools

You can activate the Heliodon tool on Sun Setting Toolbar in a 3D window.

The program displays the Heliodon in the centre of the active 3D window. You can switch off the Heliodon with another click on the Sun Setting toolbar or with a simple left click on any point of the 3D window except the Heliodon markers.



Heliodon tool

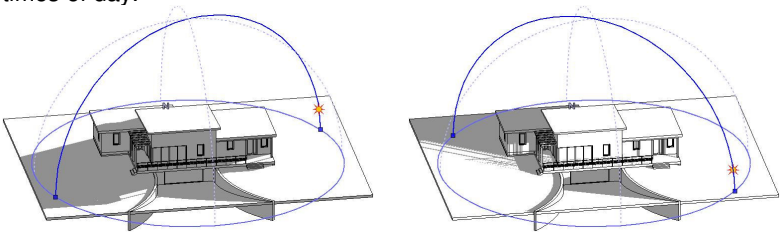
The Heliodon represents the sun position with its azimuth and zenith angle.

7.1.1. Azimuth

An azimuth is an angular measurement in a spherical coordinate system. The vector from an observer (origin) to a point of interest is projected perpendicularly onto a reference plane; the angle between the projected vector and the reference vector on the reference plane is called the azimuth.

See more in http://en.wikipedia.org/wiki/Azimuth

You can move the azimuth with the blue dot markers on the Heliodon heliodon's flat surface with mouse left click. The model illumination follows the changes and you can see how the building would look at various dates and times of day.

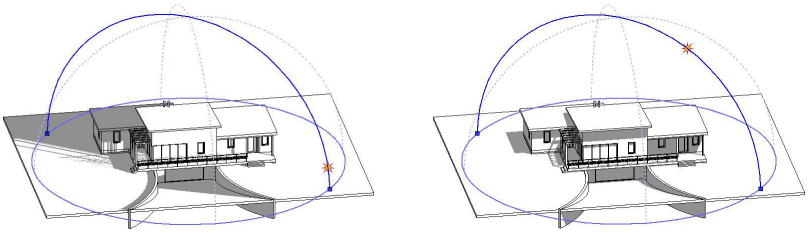


Azimuth movement

7.1.2. Zenith

The zenith is the point in the sky that appears directly above the observer. It helps to describe the location of the Sun
See more in http://en.wikipedia.org/wiki/Zenith

You can move the zenith with the small sun marker above the Heliodon heliodon's flat surface with mouse left click. The model illumination follows the changes and you can see how the building would look at various times of day.



Zenith movement

7.1.3. Concentric rings

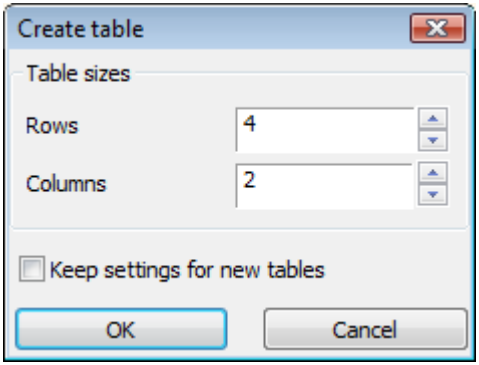
Two rings represent the North and its perpendicular direction with dotted blue lines. When the designer sets up the right Nord direction the rings follows the changes. The N (North) sign displays the North direction.
The other ring represents the East-West axis.

8. Text Table

Text Table allows you to create and edit group of texts in a formatted way. In this release the text table management tools are linked to markers.

8.1. Create text table

You can create a table by describing the columns and rows the table is going to have.

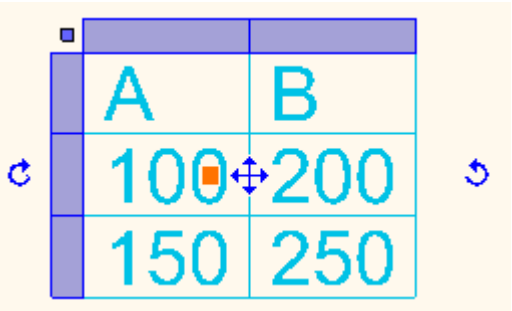


When the *Keep settings for new tables* are on, the current column and row number will be the new default value.

Now you can place the new text table with empty text fields.

8.2. Table editing commands

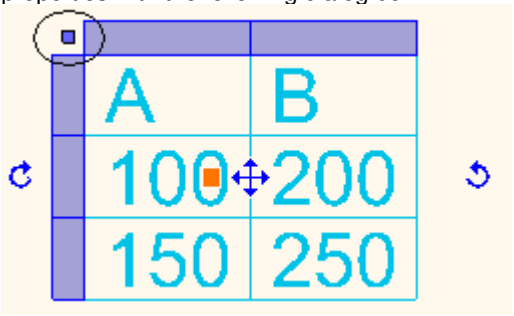
Select the table on the drawing with a left click to change its content or properties.

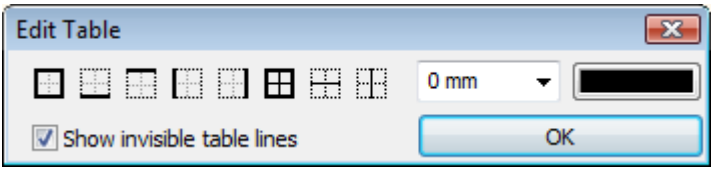


The text table management tools are linked to markers.

8.2.1. Table text properties

If you click on the top left square marker you can modify the table text properties with the following dialog box.



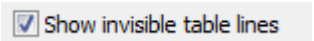


Border line

Border line width

Border line color

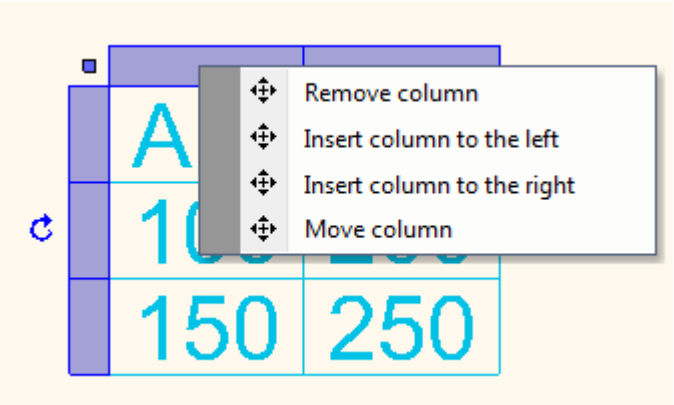
Show invisible lines



8.2.2. Edit column

To edit a column in a table text, follow these steps:

- 1. Select the table
- 2. Click the blue field above the column
- 3. On the submenu, select a command how you would like to modify the column.



Remove column

Select the column to be deleted.

Insert column to the left

Insert a new column to the left of the column that is selected

Insert column to the right

Insert a new column to the right of the column that is selected.

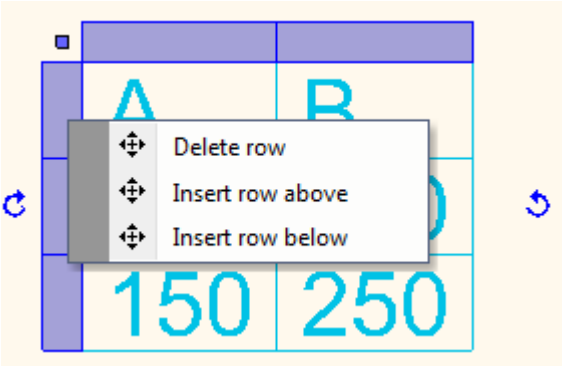
Resize column

You can resize the width of a column with dragging the right line at a new position, and the column to the left of the line that is dragged, is resized. The part of the table to the right of the column that is resized, will be repositioned (and not resized).

8.2.3. Edit row

To edit a row in a table text, follow these steps:

- 1. Select the table
- 2. Click the blue field left to the row
- 3. On the submenu, select a command how you would like to modify the column.



Delete row

Select the row to be deleted.

Insert row above

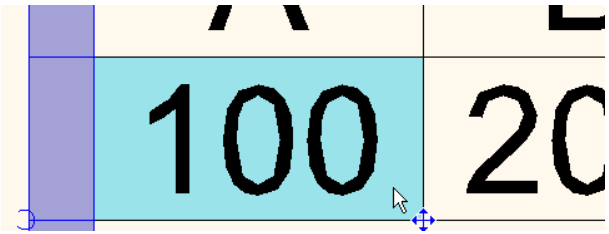
Insert a new row to the top of the row that is selected.

Insert row below

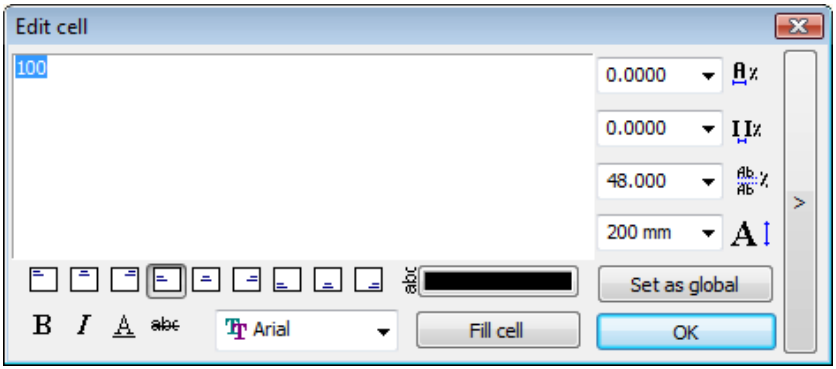
Insert a new row to the bottom of the row that is selected.

Edit fields

You can edit a cell by selecting an existing table and click inside the cell.



This dialog box can be used to control the following settings:

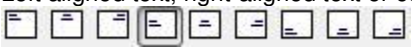


Input field

When you press the Fill cell button, the text input is updated into the selected cell. Each field can be a multiline string. Alignment of columns and rows are handled dynamically.

Cell Alignment

It determines the vertical and horizontal position of the text within the cell: Left aligned text, right-aligned text or centered text



Effects

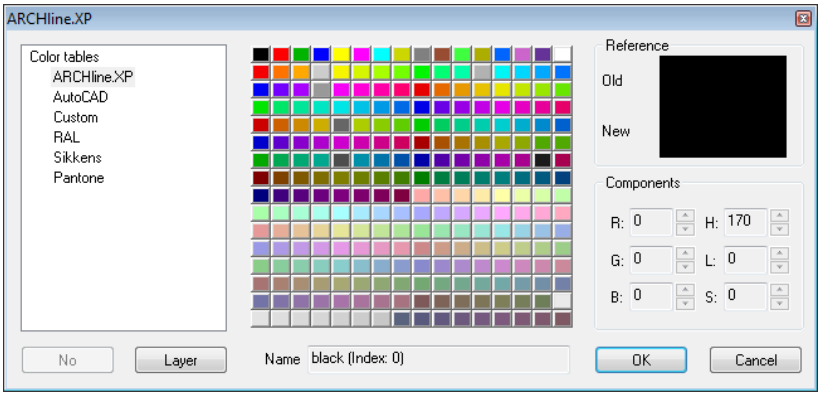
The effects property is used to specify text as bold, italic, underline or strikeout.

Font names

Choose from the list of font family names installed on your operating system.

Color

This dialog defines the text color.



Font width

You can change the font width. The value of font width is interpreted relative to font size (percentage). Type the value in % of font size or choose it from the list.

Character spacing

You can change the spacing between characters. The value of character spacing is interpreted relative to font size (percentage). Type the value in % of font size or choose it from the list.

Line spacing

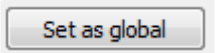
You can change the spacing between lines in case of multiline texts. You can stretch or compress an entire multiline text to make it fit and look the way that you want it to. The value of line spacing is interpreted relative to font size (percentage). Type the value in % of font size or choose it from the list

Font size

You can specify the font size in mm. Negative values are not allowed.

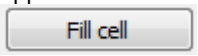
Set as global

Set as global button applies all text formatting properties of the selected cell to the whole text table.



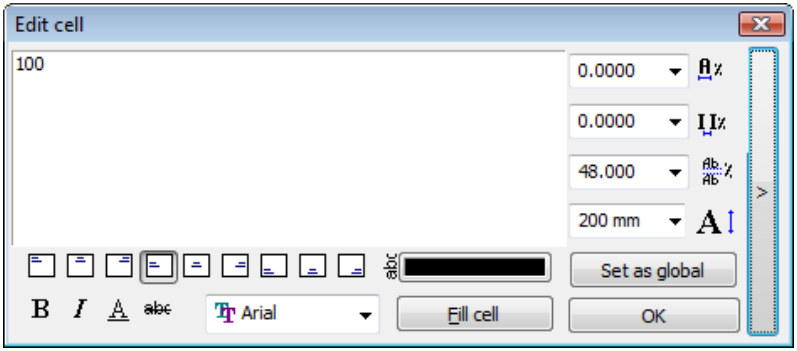
Fill cell

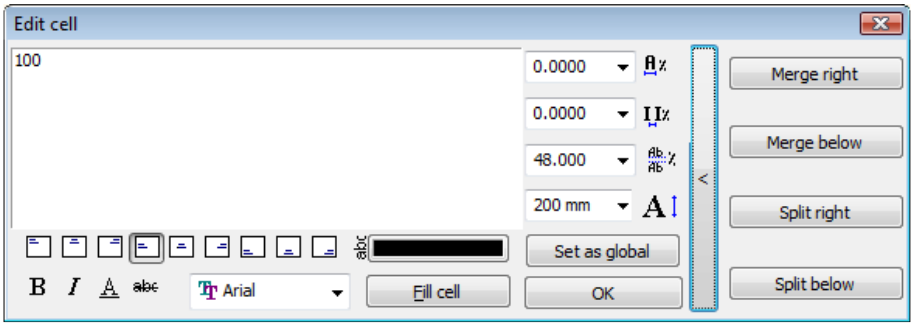
Fill cell button applies text changes of the selected cell. The changes are applied immediately and there is no need to close the dialog with OK button.



8.2.4. Merge cells into one cell in a table

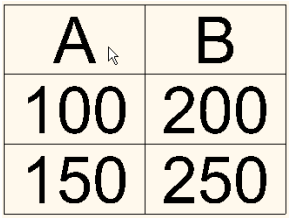
You can combine two or more cells in the same row or column into a single cell.
Press the „>” long vertical button to make the options visible.



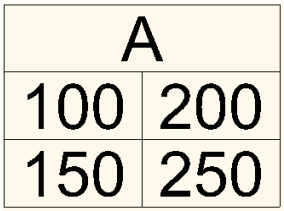


Merge right

Select the cell you want to merge to the right. The contents of the cell to the right will be deleted.



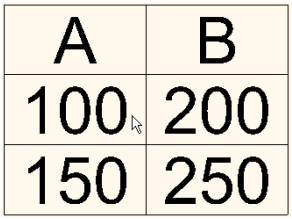
Before merge



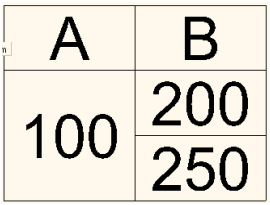
Merge

Merge down

Select the cell you want to merge to the cell below. The contents of the cell below will be deleted.



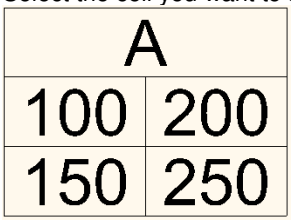
Before merge



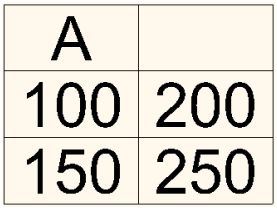
Merge

Split right

Select the cell you want to split to the right. The new cell will be empty.



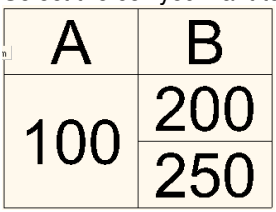
Before split



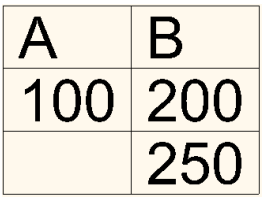
Split

Split below

Select the cell you want to split to the below. The new cell will be empty.



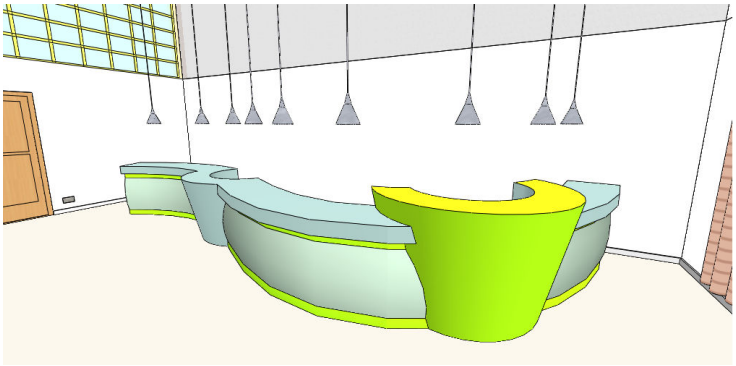
Before split



Split

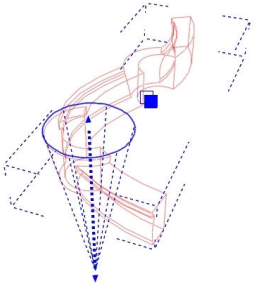
9. Editing 3D solids

ARCHLine.XP® facilitates moving, copying, editing and deleting components of complex 3D solids created by means of boolean operations like union or subtraction.

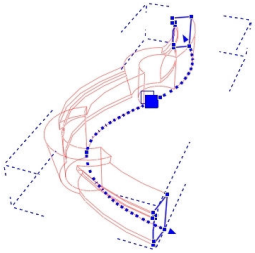


9.1. Selecting components

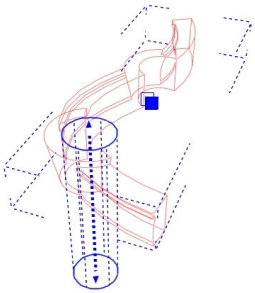
The components of the 3D solids can be selected like wall or slab layers: by selecting the **Edit Components** command in the menu of the Move marker or by clicking the appropriate component while pressing and holding down the **ALT** key.



A cone is the selected component



An extruded solid is the selected component



A cylinder-shaped hole is the is the selected component

You can navigate between components by using the **Previous component** or **Next component** commands of the marker. The marker appears automatically if a solid component is selected and the 3D solid consists of at least two components.

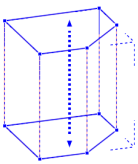
You can modify the shape of the solid which consists of only one component by selecting the single component.

You can select the holes in complex solids as components if they are created by subtracting one component from another, by clicking the inner surface of the hole while pressing and holding down the **ALT** key.

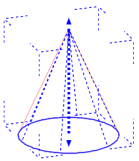
9.2. Editing Components

9.2.1. Editing an Extruded Profile

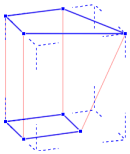
The shapes of some components are based on one or more 2D profile. The cylinder is generated by extruding a circle along a straight path. By selecting the given component you can edit these profiles.



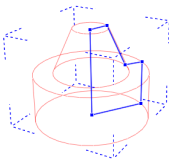
Basic extruded solid



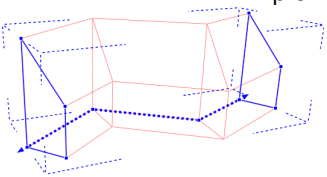
Cone



Solid based on two profiles



Rotational solid



Solid extruded along a path

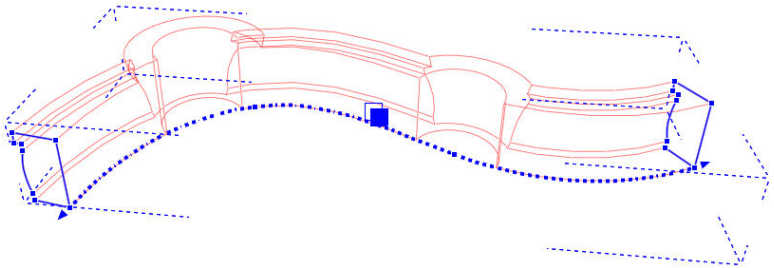
After selecting the desired component just click on an edge or node of the profile and select the appropriate command from the Marker menu. These menus contain the following common Profile editing commands:

- Move Node
- Delete Node
- Insert Node

- Fillet
- Offset
- Offset All
- Turn Into Curved Edge
- Turn Into Straight Edge
- Change Arc
- Change Radius

9.2.2. Editing the Path of Extrusion

Some components are created by extruding a profile along a given path. After selecting these components it is possible to modify the path of extrusion.



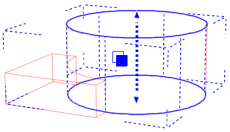
Solid extruded along a spline

After selecting the desired component just click on an edge or node of the path and select the appropriate command from the Marker menu. (You can access the first and last point of the path by clicking on one of the arrows.) These menus contain the following commands:

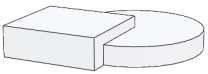
- Move Node
- Delete Node
- Insert Node

9.2.3. Changing height and slanting

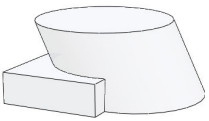
Some components are created by extruding a profile along a given path. After selecting these components it is possible to modify their height or to slant them.



Selecting the cylinder component



Result of decreasing height



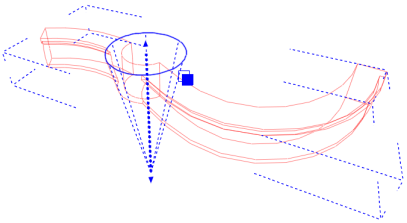
Result of slanting

After selecting the desired component just click on one of the arrows and select the appropriate command from the Marker menu. These menus contain the following commands:

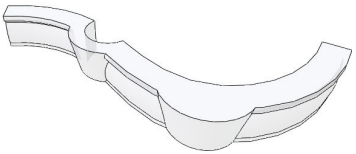
- Change Height
- Slant

9.3. Moving, copying and deleting components

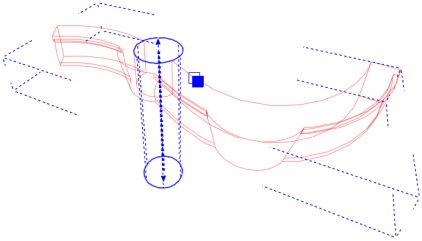
ARCHLine.XP® facilitates moving, copying and deleting components of complex 3D solids created by means of boolean operations like union or subtraction. If a component is copied, the copy inherits the original one's relations to the other components. For example, if the original component is a hole added by a „Subtract" Boolean operation, the copied component will be a hole, too; it will be subtracted from the same components as the original one.



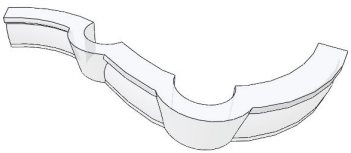
Copying the selected cone



The copy inherits the original component's relations to the other components.



Copying the cylinder shaped hole



The copy will be a hole, too.

After selecting the desired component just click on one of the arrows or node markers and select the appropriate command from the Marker menu. These menus contain the following commands:

- Move
- Copy
- Delete

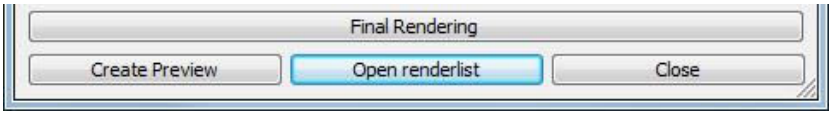
10. Render list – batch render

10.1. Introduction

Render list feature in ARCHLine.XP® raises the efficiency of workflow of generating photorealistic spectacular views. Render list can store all necessary information and settings to create rendered images later on. You can add views of a model to render list, even if they are scenes from different projects.

10.2. How to use render list

You can access render list by pressing the Render list button at the bottom of Photorealistic Render dialog. You can find Photorealistic Render by clicking on its icon on 3D mode toolbar of ARCHLine.XP. The tool is available when you are working in 3D view.

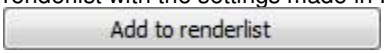


Using render list is quite simple. First you need to add a scene from the activated 3D view to the list with the previously set parameters of photorealistic render. There is the possibility to add one or more project's several view to the same render list.

Please note that ARCHLine.XP® keeps renderlist until it is running. When you close ARCHLine.XP® the actual renderlist will be erased, and the list will be empty next time you start the software!

10.2.1. Add to renderlist

With the help of the Add to renderlist button you can add a specific scene to renderlist with the settings made in Photorealistic render dialog window.

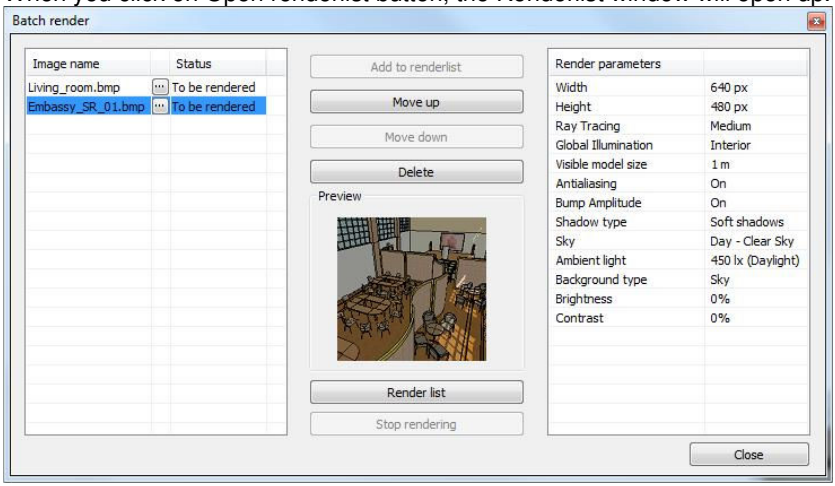


The Save as… window will appear where you can define the final picture's path, name and extension.

Click on Save, and the scene with the settings will be added to renderlist. The final image file will not be created this time, only when you render an item of the renderlist.

10.2.2. Open renderlist

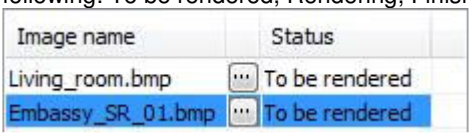
When you click on Open renderlist button, the Renderlist window will open up.



At the left side of the dialog window you can see the actual renderlist, in the middle you can find the control buttons and the preview area, and at the right side you can check the render settings of the selected renderlist item.

Renderlist

The two rows of the renderlist are showing the name of image and the status of it. Image name shows the name of the final image after rendering the scene. You can change it any time before rendering by clicking on the ... button. Status shows the actual status of the renderlist item. It can be the following: To be rendered, Rendering, Finished.



Move up

Using the Move up button you can change the order of the render list, setting the selected item to be rendered earlier.

Move down

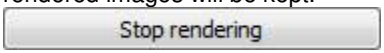
Using the Move down button you can change the order of the render list, setting the selected item to be rendered later.

Delete

You can remove a renderlist item by pressing the Delete button.

Stop rendering

With the help of this button you can stop rendering the renderlist. The already rendered images will be kept.



Preview

In the preview window you can see a simple version of the scene. This will help you when you have multiple scenes to render, to find the one you are looking for.

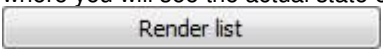
Render parameters

You can check the render parameters of the selected renderlist item.

Render parameters	
Width	640 px
Height	480 px
Ray Tracing	Medium
Global Illumination	Interior
Visible model size	1 m
Antialiasing	On
Bump Amplitude	On
Shadow type	Soft shadows
Sky	Day - Clear Sky
Ambient light	450 lx (Daylight)
Background type	Sky
Brightness	0%
Contrast	0%

Render list

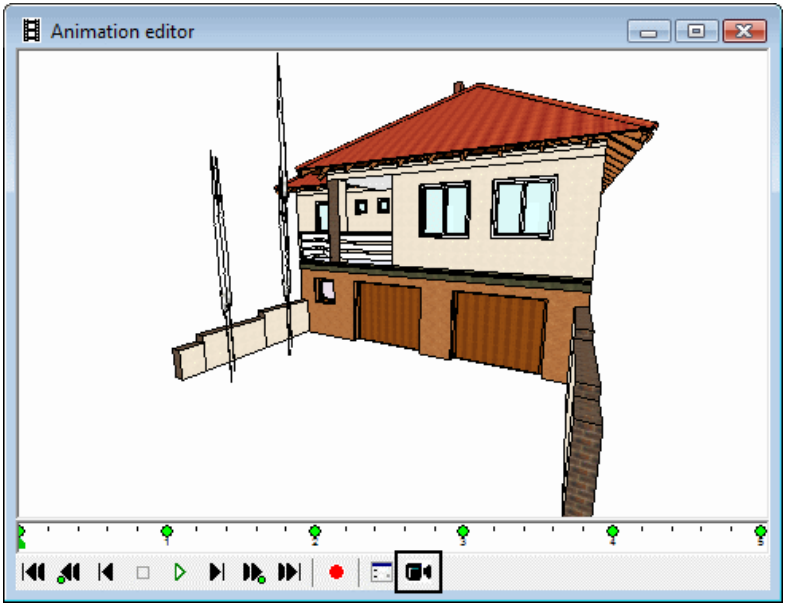
By pressing the button the rendering of the renderlist items will begin in sequential order from the first item of the list. A render window will show up where you will see the actual state of rendering.



Rendering a photorealistic image costs a lot of the computer's resources (like memory and processor). Because of this, we recommend you to start rendering a renderlist in times when it is not disturbing.

11. Animation editor – quick AVI rendering

Add – on menu – Animation – Preview animation dialog is extended with a quick AVI rendering command (camera icon). This command creates an animation video in AVI file format. The quality of the video corresponds to the 3D representation (wireframe, hidden lines, textured, x-ray view etc.).

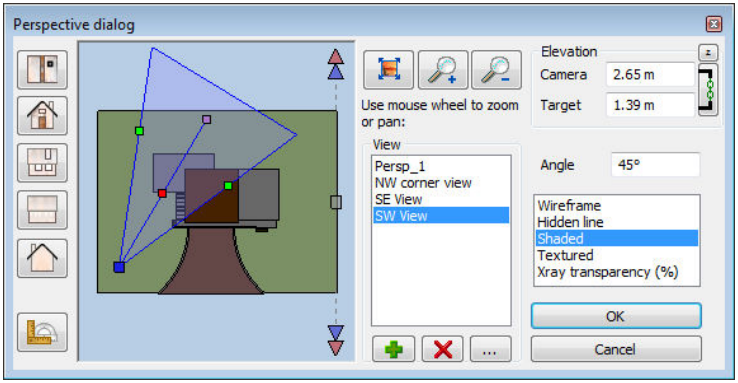


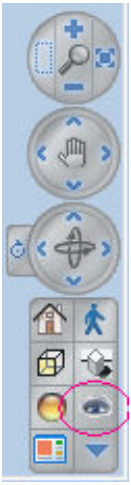
There is no need for Rendering Module to use quick AVI rendering command. This tool is based on the settings of the active DirectX 3D window.

12. Perspective view

In the latest version the set of perspective views become much more comfortable and expanded further possibilities.

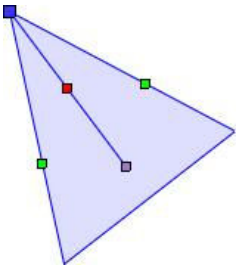
You can set the 3D perspective view in the main menu: *View – 3D visualization – Perspective view* or press the new button, the perspective view icon of NaviBar.





12.1. View settings - camera handling

You can set the desired view easily with the camera, which you find in the Perspective view in the dialog window.



Camera tool

The camera tools display the camera (blue point), the point of view or subject (grey point), the connection of the camera and the point of view (red point) and the angle (green dots) with different colour of markers. You can move the markers easily with the “Drag and drop” method.
The following camera handlings can be implemented using the aforementioned markers:

Viewpoint setting

You can set your viewpoint with handling the camera’s marker. The viewpoint always looks at the point of view or subject. By setting these two settings will adjust to the viewpoint.

Point of view setting

You can set the point of view or subject with the handling of the right marker. The viewpoint always points to the subject.

Angle setting

You can set the angle of the camera with the move of the viewpoint markers.

Camera handling (dolly)

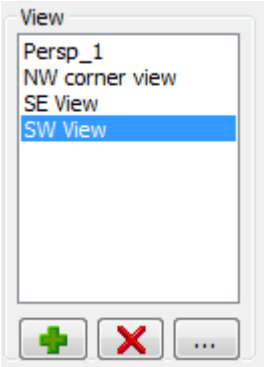
You can move the camera with the camera-markers. In this case the viewpoint will move with same extent and direction as the camera. Therefore we call this style of camera handling as dolly, also used to call in the film production, where the camera is moved by a cart.
Thus the direction of the camera view is remain, only the spatial position changes.

12.2. Custom view handling

It is possible to save the individually set views. With this feature you can save your favourite viewpoints and set them precisely any time.

View list

You can check your custom viewpoints in the view list.



Add view

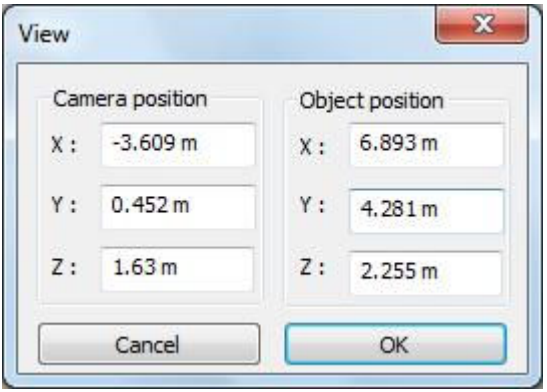
New views can be added to the View List by using the View button. A new view will be added to the View List, which can be renamed by double-clicking on it.

Delete view

You can delete View from the View List with the Delete View button. Warning! The deletion of the selected view will immediately implement.

View property

You can view and edit the currently selected settings with the View Properties button. You can set the view of the Camera and Object Position, which is written into the selected view by pressing the OK button.

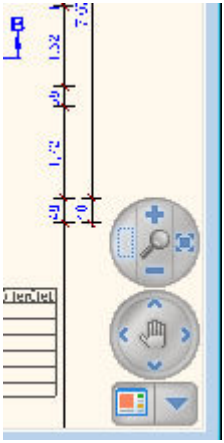


Switch between Views

You can switch between previously saved Views by clicking on the name of the appropriate View. This previously saved View will be activated and will be displayed in the 3D View window after you pressed OK button.

13. NaviBar

The NaviBar is a simple tool to navigate in the drawing windows. Its appearance in the 2D (2D drawing, 3D view, Printing Layout) and 3D (3D view, Dynamic Section) is different.



2D Navibar

3D Navibar

With NaviBar, you can navigate with simple left mouse clicks or by dragging in some cases like zooming, panning or rotating. To drag, you have to click on the appropriate command, hold down the mouse button and move the mouse.

13.1. NaviBar tools

13.1.1. Zoom

You can zoom the drawing with this tool.
It contains the following commands:

Dinamic Zoom in/out

Hold down Dinamic Zoom in/out button, and move your mouse up and down to use dinamic zoom.

Zoom Window

You are prompted to pick two corners of a box on the current window in order to enlarge that area to fill the window.

Zoom in

Click on the Zoom in icon to zoom in.

Zoom out

Click on the Zoom out icon to zoom out.

Zoom all

Click on the icon to see all the entities in the drawing.

13.1.2. Pan

You can pan the drawing dynamically with this tool. The arrows show the pan direction.

Dinamic pan

Hold down the Dinamic pan button and move your mouse to use dinamic pan.

Pan left

Click on the Pan left icon to pan your drawing to the left.

Pan right

Click on the Pan right icon to pan your drawing to the right.

Pan upwards

Click on the Pan upwards icon to pan your drawing upwards.

Pan downwards

Click on the Pan downwards icon to pan your drawing downwards.

13.1.3. Rotation in 3D

You can rotate the 3D view with this tool. The arrows show the rotating direction. The small sign on the left side helps to pick the rotation center point.

Dinamic rotation

Hold down the Dinamic rotation button and move your mouse to use dynamic rotation.

Rotate left

Click on Rotate left icon to rotate the 3D model a little bit to the left.

Rotate right

Click on Rotate right icon to rotate the 3D model a little bit to the right.

Tilt down

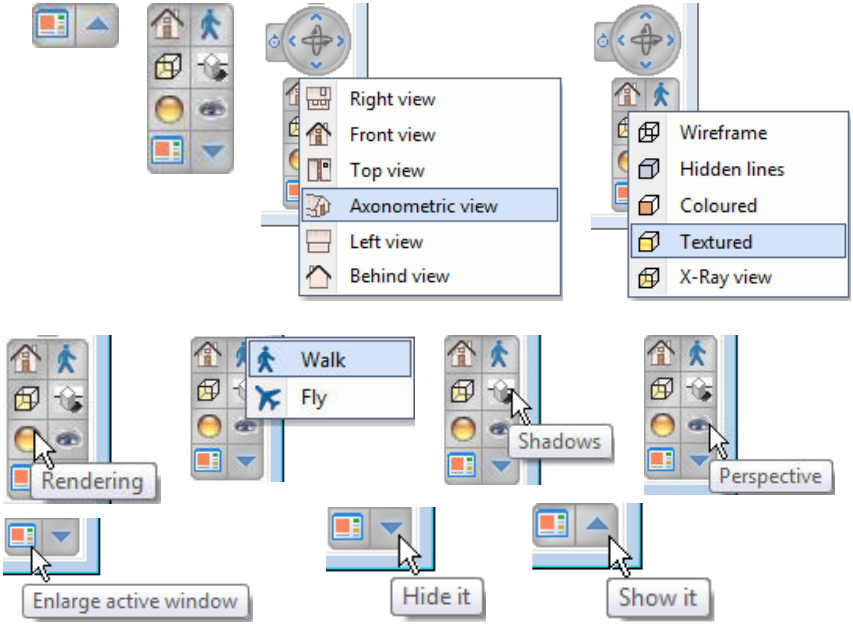
Click on Tilt down icon to tilt the 3D model a little bit downwards.

Tilt up

Click on Tilt up icon to tilt the 3D model a little bit upwards.

13.1.4. View tools in 3D

The NaviBar contains some useful commands which facilitate setting up the view of the model.



You can open or minimize the NaviBar with the arrow button in the bottom-right corner. If a window is too small to display the full NaviBar, the NaviBar is minimized automatically.
If the NaviBar is minimized, you can use the **Enlarge active window** command only.

Views

Choose a specific, predefined view from the views list.

Walk / Fly

Choose Walk mode or Fly mode from Walk / Fly list. With the help of these tools you can move around int he 3D model as you walk around in 3D space in real life.

3D mode tools

Choose a visual style from the 3D mode list. This will change the appearance of the 3D model. You can select one from Wireframe to transparent X-ray visual style.

Shadow switch

Click on Shadow switch to turn shadows on/off. The shadows will be visualized based on the Sun settings.

Rendering

Click on rendering to set the properties of the rendered image.

Perspective view

Click on Perspective view to set the camera in the 3D model. You will see the model in perspective through the camera.

Enlarge active window

Click on Enlarge active window to enlarge the selected active window. All inactive windows will be organized automaticall by the software to the right side of the workspace.

14. Project navigator

When you save the project, each drawing (floor plans, facade views, sectional drawings and perspectives) goes into one file, with a .pro file extension.
This project file contains all the information including materials created by the User, object properties, architectural settings, display settings, hatch patterns and line types.
Only those sets are saved in the projects.
The 3D database is not saved in the project by default, only upon your request.
Drawings that make up the projects are listed in the Project Navigator.

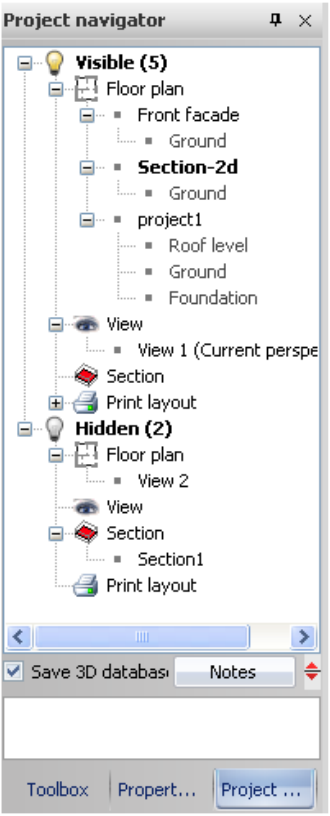
As a consequence of the new Project Navigator feature the previous release Project management dialog is cancelled in the ARCHLine.XP® 2010 release.

14.1. Project navigator in details

The drawings that make up a project are grouped as *visible* and *hidden* drawings. What is the difference? The hidden drawings have no assigned window but remain part of the project when you save it. You can also move a drawing to the hidden drawings group if you click X button of the window as you close it.
These *visible* and *hidden* folder contain the following sub groups:

- 2D drawings (floor plans)
- View (perspective and axonometric views, wall views)
- Section (sections)
- Print layout (list of print layouts)

You can visualize the buildings and floors of the 2D drawings as well with a click on ⊞ sign or with a double click on the drawing name.



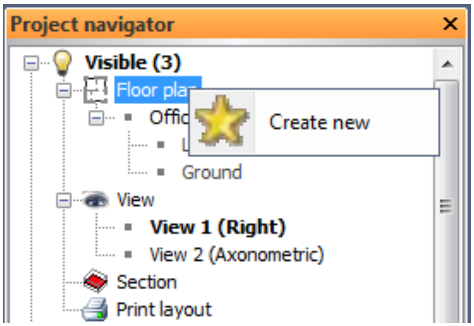
14.1.1. How to use the Project Navigator?

Active drawing

The mouse left double click makes the selected drawing to active drawing. When the selected drawing is in the **Hidden** category it will be displayed on the screen and will be moved to the **Visible** category.

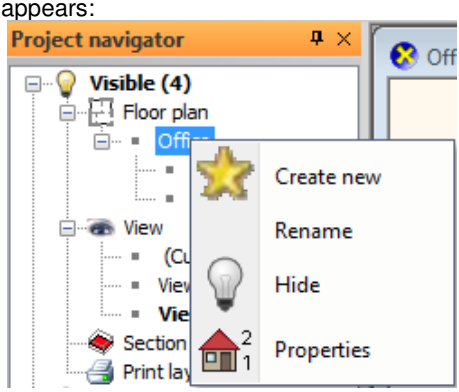
New drawing

The mouse right click makes over the folder name offers to create the appropriate new drawing according to the folder name.



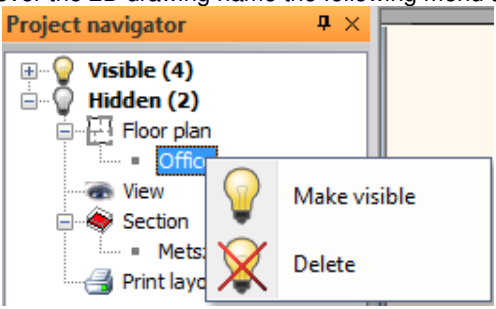
2D drawing management

Using the mouse right click over the 2D drawing name the following menu appears:



- **Create new** enables to create a new 2D drawing.
- **Rename** command enables to change the psedo name of the drawing. You can overwrite the pseudo name of the drawing but the real file name of the drawing will not change.
- **Hide.** The selected drawing will be temporarily invisible, i.e. it will not have a window but it *will remain part* of the project. The drawing moves to the Invisible group.
- **Properties** command opens the 2D drawing related floor management dialog where you can modify the current floor structure.

When you chose a 2D drawing in the **Hidden** folder with the mouse right click over the 2D drawing name the following menu appears:

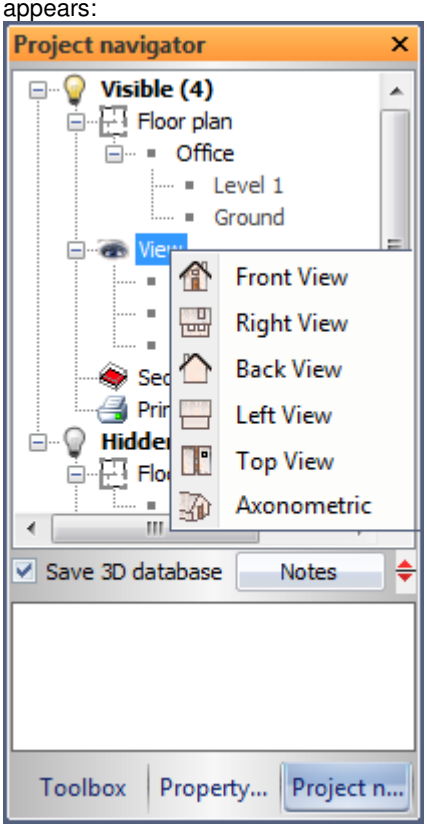


- Click on the Light bulb icon the **Make visible** command activates the hidden drawing and moves to the **Visible** folder.
- Click on the **Delete** command to delete the drawing from the project. This means that you delete the drawing from the hard disk and so it will not be accessible any more.

! Remember not to delete the 2D drawing (floor plan) unless you do it for some specific reason.

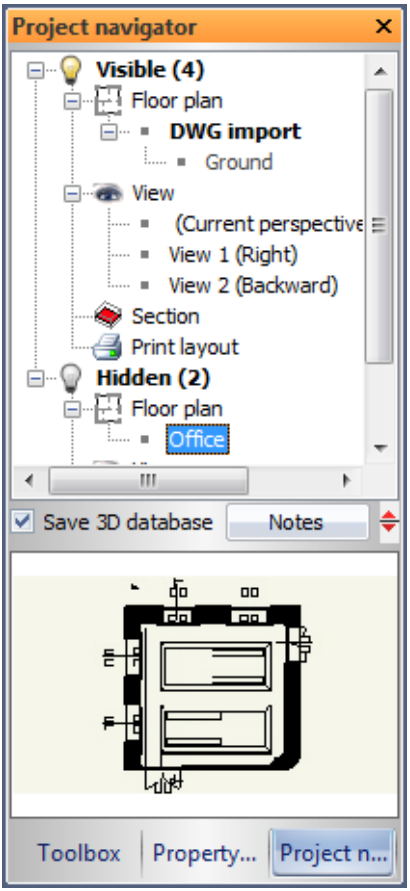
3D view management

Using the mouse right click over the 2D drawing name the following menu appears:



14.1.2. Preview

The Project Navigator encapsulates a preview control that displays the image of the selected drawing in the **Hidden** folder. Use the mouse left click over the file name and the preview displays the image when available.



14.1.3. Save 3D database

This check box controls the saving of 3D database into the project.

- **Off**

It is switched off by default therefore the 3D database is not saved into the project. The 3D model can be created from the floor plan any time.
If we use the 3D solid modeller and we do not save the 3D solids in the object library, we need to save the 3D model.

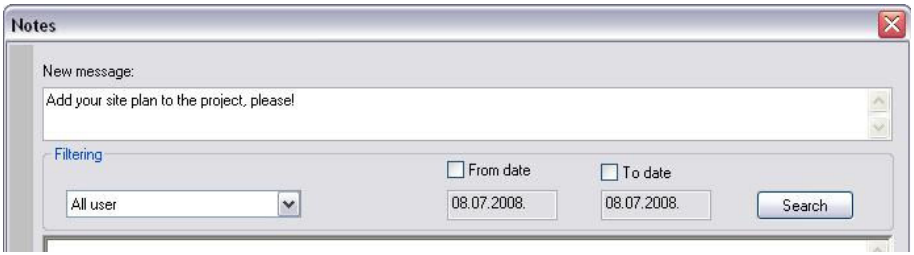
In a case like this the program recognizes that the plan contains 3D elements which have not link to the floor plan and when the project is saved the program offers the possibility.

- **On:**

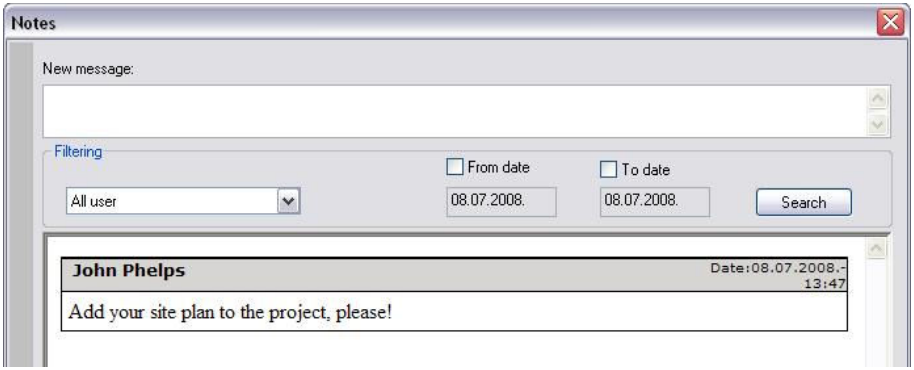
If it is switched on the whole 3D database is saved, and the project size considerably increases. by saving the 3D model.

14.1.4. Notes

You can add notes to the project.



You can submit a note with the *Enter* key. For the case you exit from the dialog by clicking the *Ok* button, the new message will be saved, too. The messages appear in the message list. Click *Cancel* if you want to quit without saving the message.



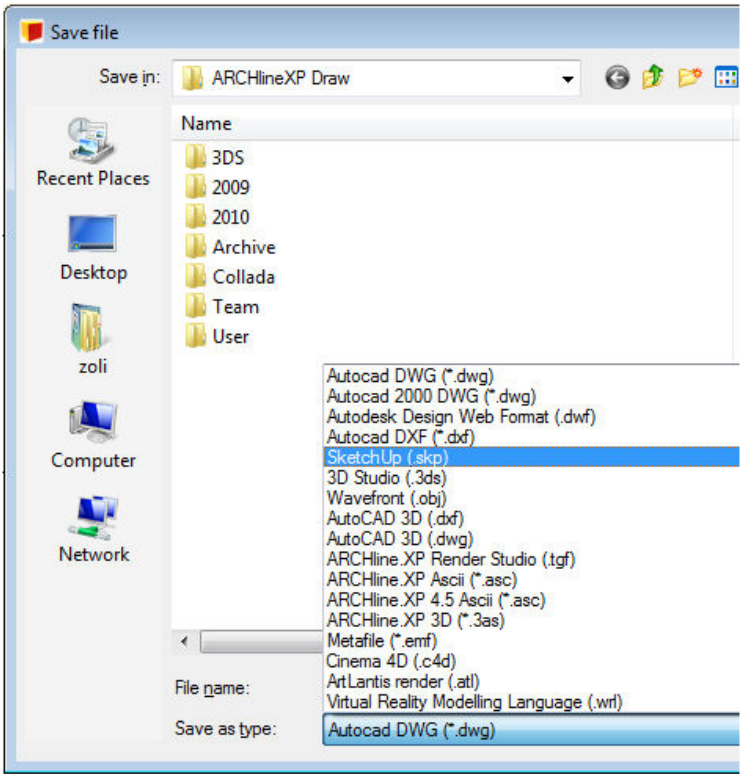
15. File compatibility: SketchUp export

Export to SketchUp

ARCHLine.XP® allows you to export SketchUp SKP files (.skp) directly.

To export a model into SKP file format choose *File – Export…* from the main menu.

The Save file dialog window will appear. Specify the path, name and extension of the exported file.



The exported SKP file you can open with the Google SketchUp modeler.

16. Other news

16.1. Quick selection dialog

Quick selection dialog can be helpful in case of complex drawings when more elements found by a left mouse click selection operation. It can happen that you have to select the desired element from 5, 10 or even more elements.

Quick selection dialog makes the overview of more elements easy by creating a clear, user-friendly selection list.

How to use

When clicking a point with left mouse button on the drawing where more elements found, press TAB key repeatedly for switching between elements. At the same time the Quick selection dialog appears by which you can monitor continuously the state of selection.

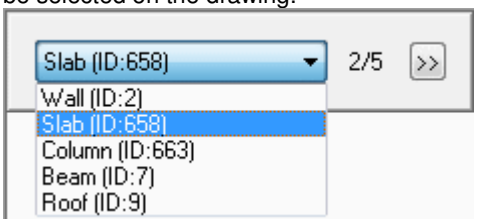
The Quick selection dialog doesn't appear when you can't switch to another element (for example there is no other element nearby).

Quick selection dialog shuts down by cancelling the selection.

Quick selection list

The list appearing in the Quick selection dialog helps to choose the desired element from the list of more elements. Click the quick selection list button for this.

Click the element you want to choose from the appearing list and then it will be selected on the drawing.



After that you can modify the properties of the selected element in the appearing Property manager on the left or different operations like rotation or move can be executed.

Forward button

With the help of Forward button you can switch to the next element in the selection list. Its operation is the same as pressing the TAB key repeatedly. Click Forward button to choose the next element in the list.

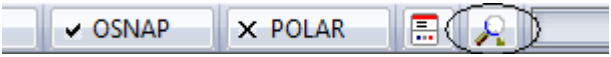
16.2. Magnifier tool

Magnifier tool can be used in any design situation, when a fine mouse movement is needed to define a specific point. Using the Magnifier, you don't have to change the actual view, because when you switch Magnifier on, you are able to zoom inside the magnifier bordersa and .

During the use of Magnifier tool you can start and run any other design tool.

16.2.1. Using the Magnifier

You find the Magnifier tool at the bottom part of the interface of ARCHLine.XP, on the Status bar. Click on the icon to switch it on/off..



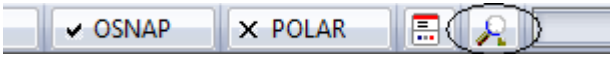
When you switch on Magnifier, move your mouse over the active drawing. You can see the borders of Magnifier.

Use the wheel on your mouse to zoom in inside the borders of the Magnifier. This way you can enlarge the area inside the borders. You can see the actual Magnification value at the left top corner of the Magnifier's rectangle.

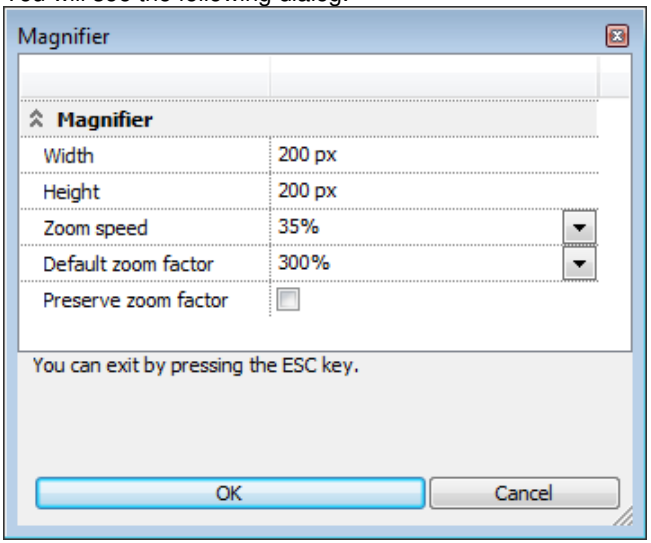
To exit Magnifier, please push the Magnifier icon again on the Status bar of ARCHLine.XP, or push the ESC key on your keyboard.

16.2.2. Magnifier settings

You can change the settings for the Magnifier tool by right-clicking ont he Magnifier icon on the Status bar of ARCHLine.XP.



You will see the following dialog.



Width

You can set the width of the border of the Magnifier rectangle in pixels.

Heigth

You can set the heigth of the border of the Magnifier rectangle in pixels.

Zoom speed

You can change the magnification step, which will be used when you scroll the mouse wheel.

Default zoom factor

By setting the Default zoom factor you can define the starting value of Magnifier, which you will see when you activate the Magnifier tool.

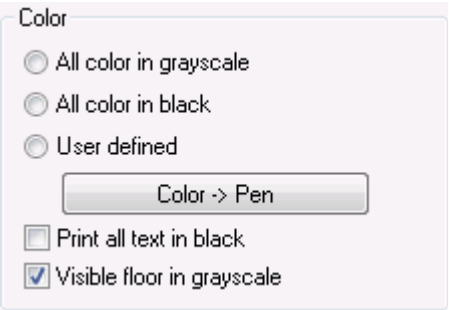
Preserve zoom factor

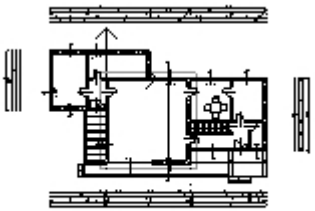
By setting the Preserve zoom factor, the software will remember the last used zoom factor, when you exit the Magnifier. Next time when you start Magnifier the software will start with the preserved value, instead of the default zoom factor.

16.3. Printing: Visible floor in gray scale

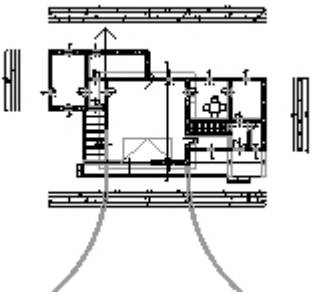
In the Print dialog window you can find the *Visible floor in greyscale* option at the top right frame. When you turn on this option, you will be able to print out the content of the visible floor too, as you see it on the drawing.

The content of the active floor will be printed out as previously set, and the content of the visible floor will be printed out in plain gray.
Turn on this option if you want to print out the content of the visible floor as well.





Visible floor in grayscale OFF



Visible floor in grayscale ON

16.4. Product support developments

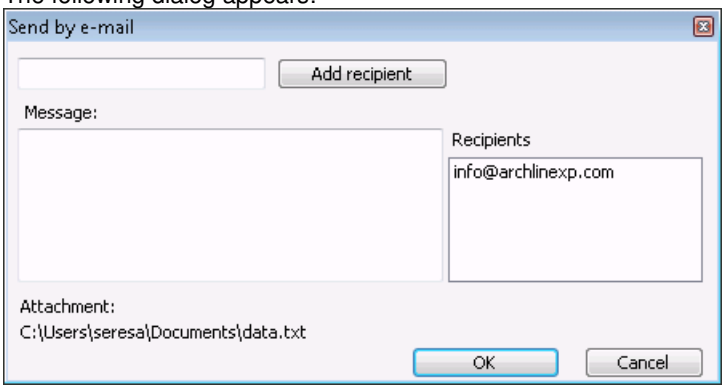
In the About dialog window of ARCHLine.XP there is the possibility to send licensing and system information to your support partner directly by e-mail, and also there is te possibility to register add-ons in the About dialog window.

16.4.1. Send by e-mail

ARCHLine.XP® licensing and system environment information along with your own message can be sent to your support partner by e-mail. For this you need live e-mail client software. This e-mail client is used for sending this information. Sender's e-mail address is gained from default e-mail account settings of default e-mailing client software. In the case you do not have an e-mail client with proper account setting, a dialog may appear after clicking the OK button, asking you to set up an internet connection and/or e-mail account.

Click Send by e-mail button in the *Help menu – About dialog* if you want to send data.

The following dialog appears:



Adding recipient

You can use the Add recipient button to add new address to the list of recipients. Enter the desired e-mail address of the recipient you want to add and then click Add recipient button. The e-mail address appears in the list of recipients.

Recipients

Here you can see the recipients of the e-mail. Select a recipient and press DEL key to remove a recipient.

Message

Enter the message you want to send to your support partner in the Message box. Write a message here.

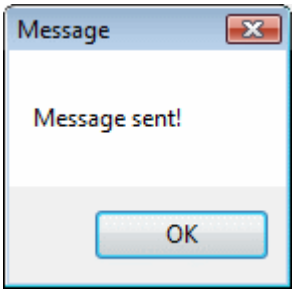
Attachment

In the Attachment row you can see the path to the data file you send to your support partner along with your support request e-mail. Based on this information you can check the content of the file before sending it.

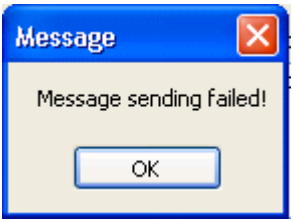
Sending

In the Send by e-mail dialog click OK to send the e-mail. Depending on the e-mail client software you use, a warning message may appear before sending the e-mail.

In case of successful sending the following message appears:

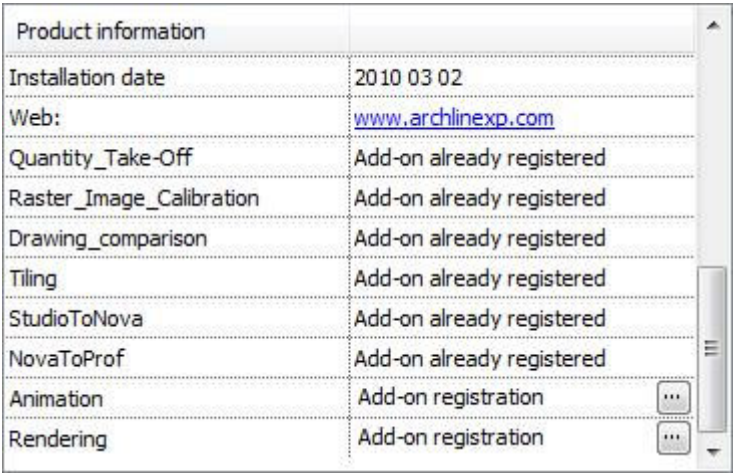


In case of unsuccessful sending the following message appears:



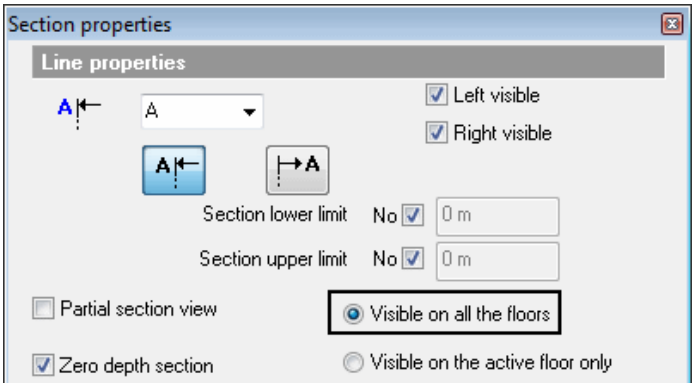
16.4.2. Centralized module registration

In the *Help menu – About* dialog all module registrations are available in one place. For a module registration you have to click the ellipsis button in the appropriate row.



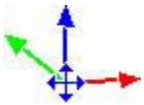
16.5. Section line on all floors

With the **Visible on all the floors** option you can make a section line visible on all floors. This option can be found in the **Section properties** dialog.



16.6. Main axis markers for 3D move

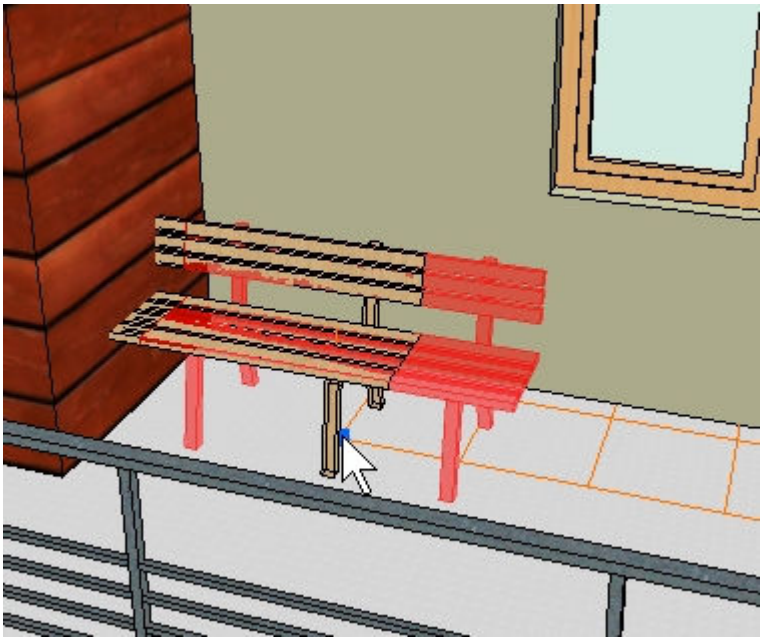
With the effective usage of DirectX technology ARCHLine.XP® makes the operations in the model space easy by interactive 3D cursors.



When selecting a 3D element, the program shows the main axis for moving operations. With the help of these markers you can move the selected element in the space easily along the main axes. Each axis has different color representation. The horizontal X axis is represented by green, the horizontal Y axis is represented by red, and the vertical Y axis is represented by blue color.

How to use

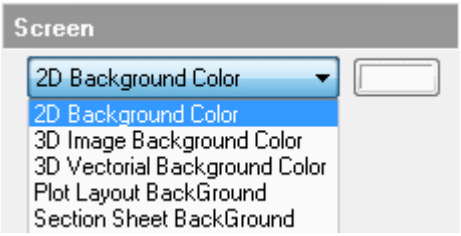
Clicking one of the main axes starts the movement along the axis. You can set the new position by moving the mouse cursor to the desired point and then clicking again.



You can see possible overlaps while moving the mouse

16.7. Unique window background colors

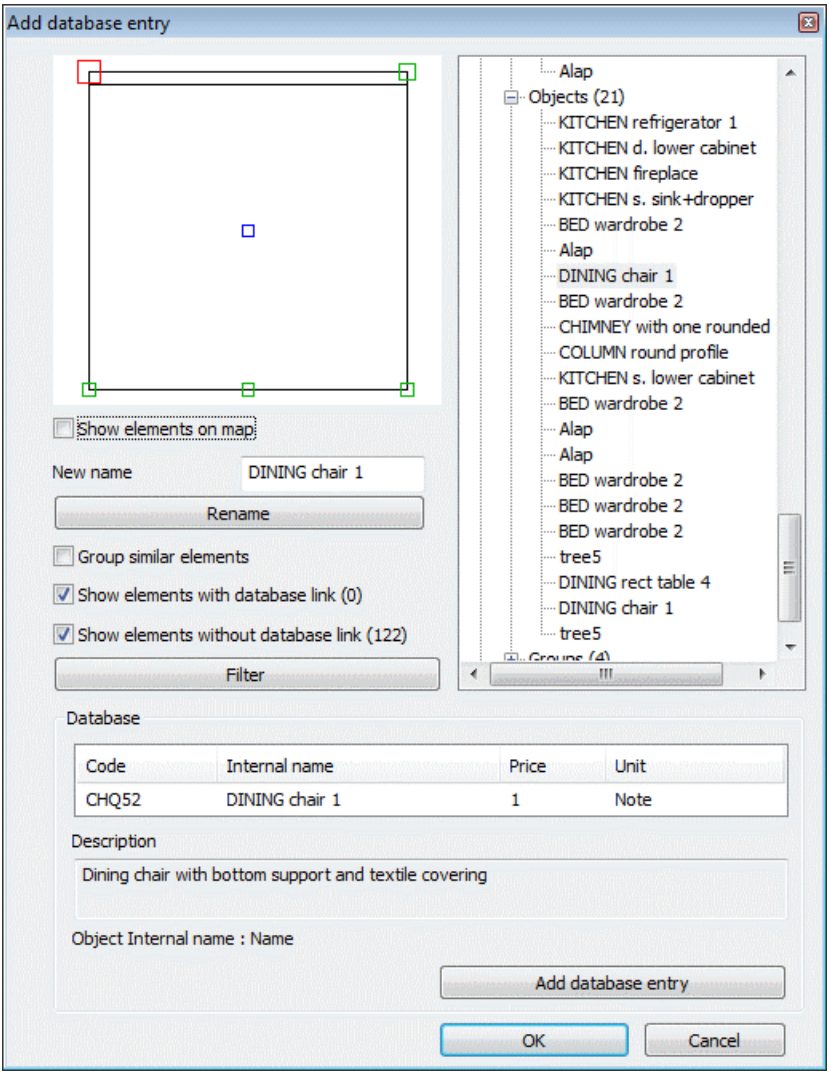
On the **Other** tab in the *File menu – Preferences – General* dialog you can define unique colors for the background of different window types.



16.8. Cost estimation – assigning cost parameters

With the *Add-on menu – Quantity take-off – Assign cost parameter* command it is possible to assign cost parameters to architecture elements on the floor-plan indirectly. Indirect cost parameters are connected to the elements only as references, opposed to the directly assigned and stored cost parameters in the element properties dialog.

The advantage of indirect cost parameters is the possibility of adding those in a large amount to a complete floor-plan without any further work on the drawing.



By clicking the **Add database entry** button, the following data can be assigned to the selected item in the appearing dialog:

- **Code**
- **Internal name** (this parameter is the reference to the selected item; for example the name of the elements in case of object, door,

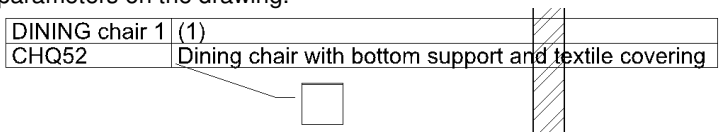
window or group, or the set name of the elements in case of wall, slab or stair, or the name of the layer if there is no set)

- **Description**
- **Material (repr)**
- **Price**
- **Unit:** pcs, m, m2, m3

With the commands (e.g. **Object**) under *Add-on menu – Quantity take-off – Cost estimation* the assigned cost parameters can be represented in the created RTF files.

16.9. Cost estimation – placing cost parameters

With the *Add-on menu – Quantity take-off – Place cost parameter* command it is possible to place the description and code fields from the assigned cost parameters on the drawing.

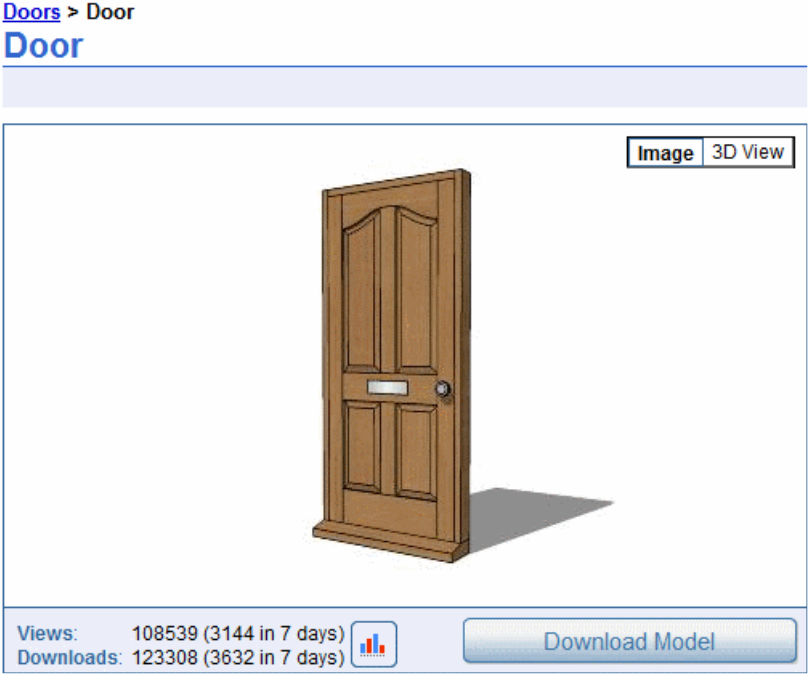


16.10. Converting object to door / window

Selected objects can be converted to door or window and saved into OLI libraries with the **Create door / window command** in the shortcut menu of objects.
For example, with this function it is possible to convert door or window objects imported from Google 3D warehouse to real doors or windows that can be placed into wall.

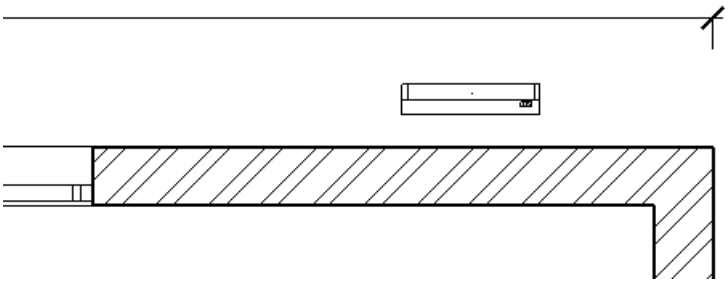
1. Step.

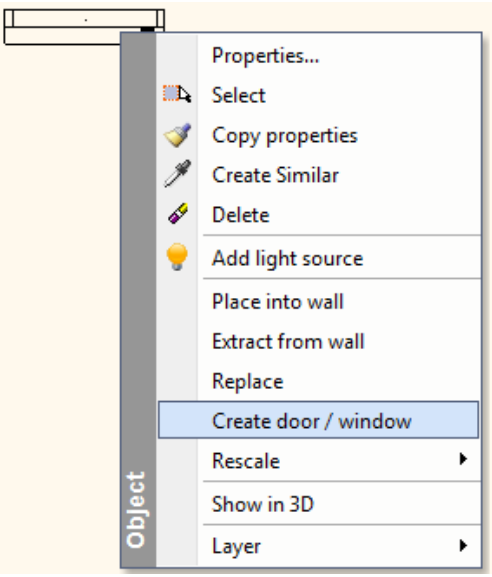
Import object from Google 3D warehouse.



2. Step.

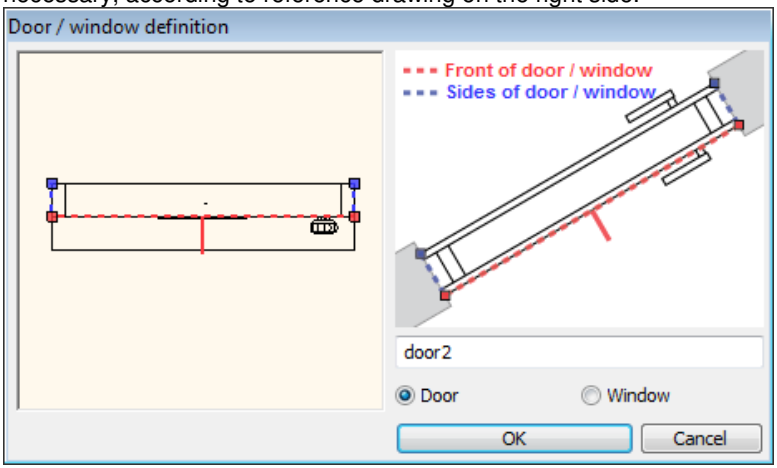
Place the object on the drawing then click with right mouse button on the object. Choose the **Create door** / **window** command.



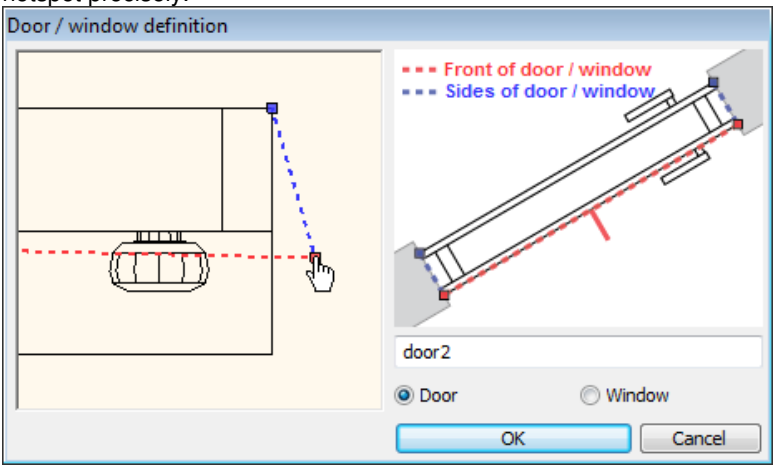


3. Step.

Relocate the 4 hotspots of the door/window on the left side by drag&drop, if necessary, according to reference drawing on the right side.



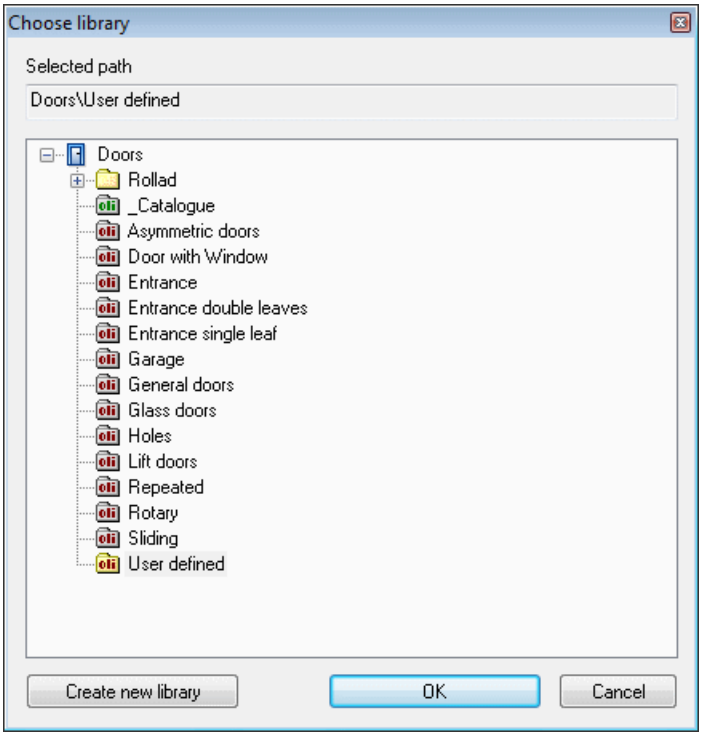
Use Use the mouse wheel to zoom the door or window shape and locate the hotspot precisely.



Choose the Door or Window category and type a new name.

4. Step.

After clicking on the Ok button choose a library for the door / window to save it.



5. Step.

Select the door from the library and place it into a wall.