ARCHLine.XP® 2017

New features

Release 1

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

Contents

1.	Changes on user interface6			
	1.1.	Changes on user interface ARCHLine.XP 2017:	6	
	1.2.	4K monitors – Scaling the interface		
2.	New feature	es	g	
	2.1.	LED light strip	c	
	2.2.	Draw LED strip		
	2.3.	Modify the route of LED strip	g	
	2.3.1.	Modify the route		
	2.3.2.	Modify the route in the properties window		
	2.4.	The properties of LED strip		
	2.4.1.	Size and light parameters		
	2.4.2.	Cross-section profile and materials		
	2.4.3.	General settings		
	2.5.	Rendering		
	2.5.1.	Rendered frame on / off		
	2.5.2. 2.5.3.	Real-time Rendering draft mode		
	2.5.3. 2.5.4.	How to finish real-time rendering Effects		
	2.5.5.	Changing material settings in real-time		
	2.5.6.	Panorama direction		
	2.5.7.	Fresnel effect		
	2.6.	Panorama 360 virtual tour		
	2.6.1.	Set Panorama Layer	15	
	2.6.2.	Place Camera		
	2.6.3.	Place link hotspot between cameras		
	2.6.4.	Place info points		
	2.6.5. 2.6.6.	View Camera- Perspective view from camera viewpoint		
	2.6.6. 2.6.7.	Build virtual tourView the Panorama 360		
	2.0.7.	Material settings		
	2.8.	Mosaic tiling		
	2.9.	Tiling advancement– Quick tiling in 3D		
	2.10.	Designing 3D shapes		
	2.10.1.	Create a 3D shape in 3D window		
	2.10.2.	Modifying 3D shapes in 3D view		
	2.11.	Importing Excel spreadsheet tables		
	2.12.	Import PDF geometry		
	2.13. 2.13.1.	Printing layout improvements		
	2.13.1.	Add the new stamp to the list of Favourites		
	2.13.3.	Edit text in dialog window		
	2.14.	New window property: angle of window exterior/interior sill	34	
	2.15.	Sill height in roof window properties		
	2.16.	Replace door and window by keeping the original bounding size		
	2.17.	Shared objects		
	2.17.1.	Shared object folder and options		
	2.17.2.	Sharing objects		
	2.17.3. 2.17.4.	Remove sharing from shared objects		
	2.17.4.	Project-specific object management		
	2.18.1.	Project-specific objects in the Design Center		
	2.19.	Projekt mérföldkövek Project milestones		
	2.19.1.	Views		
	2.19.2.	Recording the time is spent on working on a project		
	2.19.3.	How to view the Project milestones?		
	2.19.4.	Editing work process		
	2.19.5.	Deleting work process		
	2.19.6. 2.20.	Make Excel Report Environment background		
	2.20. 2.20.1.	How to add Environment background		
	0	to add =	12	



3.	BIM Standard and certified IFC export and import		
4.	Revit RFA, R	VT into ARCHLine.XP	. 47
5.	More impr	e improvements	48
	5.1.	Multiple area and lasso selection	
	5.2.	Display selection on more window 2D / 3D	. 48
	5.3.	Excel list expansion	. 48
	5.4.	Edit object.	. 49
	5.5.	Backup Archives	. 49
	5.6.	Other developments	

ARCHLine.XP 2017 is released

Observing our clients and talking to them in their natural context of using ARCHLine.XP helped us to understand our users and their real problems. We established their true needs. Our team focused on solving real design issues for users while developing ARCHLine.XP 2017 version. Powerful design tools, and more photorealistic renderings. We provide designers with the latest novelties in 2017 version. It is up to the designer, how much he/she uses out of them! - A fraction, or a substantial portion of it?

Influential main novelties:

- BIM Standard and certified IFC export and import, direct REVIT .rfa, .rvt import
- Import PDF Geometry reduces to minimal the time is spent on processing architectural file in PDF
- · Real-time Rendering draft mode
- Panorama 360 Virtual tours
- · Drawing and editing 3D shapes directly in 3D
- Import Excel Files
- Tiling in 3D Faster and easier
- Mosaic tiling Recurrence-free, detailed and variable tiling patterns
- New design tool LED stripes
- · Improved material setting, new categories, special materials, new attributes
- Improvement on printing layout perfect documentation
- · 4K monitors Scaling the interface
- Modern user interface



1. Changes on user interface

1.1. Changes on user interface ARCHLine.XP 2017:

Drawing pane

As default this function is switched off. You can turn it on by choosing the "Drawing pane visible" from the menu: "File-Options- User Interface".

Wardrobe wizard

Development of "Wardrobe wizard" finalized in 2013. Since 2014 the wizard had been replaced by Manufacturer tool (Customized cabinet) - command, which is more flexible and innovative tool. Obviously the previously created objects – furniture, still can be used and modified, but new ones cannot be designed.

Import from other Project (XREF)

This command can be found under Tools in the Main menu.

Changes in the Dimension toolbox

"Serial in Horizontal" and "Serial in Vertical" commands were moved to the first level of the Toolbox and Top menu. The frequent use of these commands requires the quick access. Both commands still can be found in the "Length – Distance dimensioning" dialog.

Renaming Top menu item: Plot Layout new name is Documentation

We synchronized Toolbox / Documentation panel with the Top menu / Documentation menu.

The Top menu / Documentation was completed by those commands which had already been found in the Toolbox such as followings:

Documentation - Wall elevation view

Documentation - Create or Delete floor snaps

Documentation - Refresh floor snapshot

Consignation commands

Commands in relation to consignation lists now can be found under Documentation:

Documentation- Quantity take-off - Excel list

Documentation - Quantity take-off - Graphic list

Documentation - Quantity take-off - Cabinet Cut List

Visual Design commands

Commands in relation to Visual Design now can be found under Toolbox / Visual Design and Top menu / Visual Design:

Visual Design - Rendering

Visual Design - Sun Position

Visual Design - Walk and Fly

Visual Design - Indoor Virtual Staging

Visual Design - Model to a Photo

Visual Design - Survey - Photogrammetry

Visual Design - Animation

New command group:

Visual Design – Panorama 360: Build virtual tour commands

Developing tiling - Tiling in 3D

- Tiling design commands directly can be reached in 3D window by (right) clicking on any tiles or base area
- The tiling layout thickness can be set (Tiling layout settings, background area properties)
- New command: "Move tiles"
- Individual tile replacement (one by one)
- Quick command for one step placing/modifying tiling style on one selected wall or all walls in a room.
- Simple command to delete all tiles on a wall.
- New pattern: 2 square+1 rectangle

Drawing recovery manager

The command can be found in the file menu of ARCHLine.XP 2017 version (published after 08/01/2017).

This command is relocated from "Tools- Accessories", it got a new name and its' function has changed compared to the version 2016.

Here you can search for projects and drawings in the selected folder or subfolder, also in the Archive.

Please note, the "Archive" function in 2017 version archives not the drawing file (.asc) but the **entire project**. One project can be archived 3 times a day.

The first project copy of the daily archive is protected, cannot be overwritten. The second and third copies will be archived only when one hours elapses between two saves.

This is a protective mechanism on those cases when the project is damaged for any reason, or unplanned item deletion or movement happened.

The content of ARCHIVE folder can be removed, and you can decide to keep the content of the last 1,2,4,8,12 or 52 week. The deleted items will be moved to Recycle Bin. See the new control in File menu / Option dialog / Open and Save panel.

New place of setting view background

Clicking on the name of the activated view the 10th item of list will be View Background settings.

More new commands on the user interface:

File - BIM - Project milestones

File - Import - PDF Geometry

File – Import – Excel table

Interior – Lighting – LED Light strip

3D - Shape

Selection - Lasso

Tools - Accessories - Element visibility on printing (make visible/invisible)

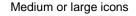
Following objects were permanently removed from Library:

Objects were created with old technology, therefore the quality of them is not satisfactory. These objects are not built in the projects any longer (due to the old technology), when opening these projects and building a 3D model, the software automatically warns that these type of objects are no longer exist. We highly recommend to replace these items with newly downloaded items or objects are created in ARCHline.XP.

1.2. 4K monitors - Updated interface

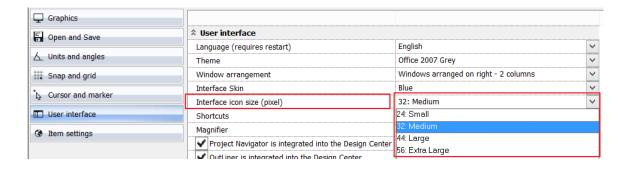
ARCHLine.XP 2017 interface items are fully compatible with large resolution displays, such as 4K. You can select icon layout with various size: small (24), medium (32), large (44) and extra-large (56), where number means pixels.

Small icons





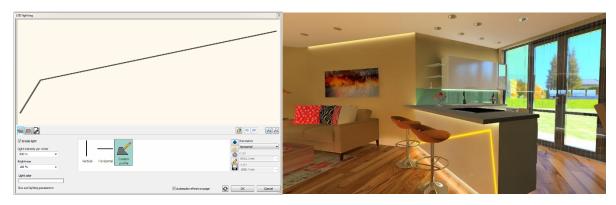




2. New features

2.1. LED light strip

The LED strip tool is used to edit individual LED tapes in 2D or even directly in 3D. It can be used to create a flexible LED light strip for concealed or visible illumination, which like other lamps, can change the brightness, light color, and turn on or off.



2.2. Draw LED strip

To draw the LED strip in 2D or 3D, the so-called route along which the LED strip runs is to be defined. You can change this path later.

- ❖ Start the Toolbar/Lighting/Draw LED lighting command.
- Click on the positions of 2D drawing or 3D model, where you would like to lay the LED string.
- Finish editing the LED strip's route, and press the Enter.
- Finishing the drawing the LED strip properties window will be displayed and you can sett the properties of LED lighting.

2.3. Modify the route of LED strip

The LED light strip path can be changed in 2D and 3D, and in the properties window. In various cases, there are different possibilities for their specificity.

2.3.1. Modify the route

To change the route, do the following:

- Select the existing LED light strip in the 2D window or the 3D model.
- Click one of the markers on the LED light strip path and select the desired command from the appears menu that.
- Modify the route.

The changes are immediately displayed.



If the path of the LED strip is not plane (for example, by raising one of its nodes), the 2D path edit option will be canceled.

2.3.2. Modify the route in the properties window

You can change the route using the Route List in the description of the LED strip properties.

2.4. The properties of LED strip

2.4.1. Size and light parameters

In the "Size and lighting" sheet you can specify the LED strip's route, brightness, colour and you can swich it on/off.



Route List

You can choose from pre-defined routes (such as "Vertical", "Horizontal" or other selectable profiles). Using the commands at the end of the Route List, you can choose another route, draw a new route, and edit existing routes.

Light on

Enable the "Lights On" option to activate for the LED light strip.

Brightness per meter

Select one of the predetermined values or type any value to adjust the brightness of LED strips.

Brightness

You can specify a value for changing the brightness. Entering 100% sets same as the original brightness, while you can increase or decrease the brightness by entering different value.

Choose the preset values, or type to be an arbitrary value to adjust the brightness of LED strip.

Colour of light

You can choose any colour of the LED light strip.

Click on the button and choose a colour from the colour table.

Directivity

You can use direction to specify whether the selected planar path should be horizontal or vertical. For non-planar routes (for example, if you have edited a node in the space by elevating it from the plane), you can not change the orientation.

2.4.2. Cross-section profile and materials

You may specify any cross-section profile and material strip. This will be applied after the LED strip is turned on.



The cross-section profile of LED strip

You can choose a cross-section profile or by clicking on the "Blue cross" button you can search the right one in Profile Library. You have several option: you can draw a new profile, also you can edit the selected profile properties or the current cross-sectional contour.

Modifying the Width and Height values of the original you may use different sizes of cross-section.

The material of LED strip

You can choose to edit or create a material that displays a program from the LED strip to off general settings.

2.4.3. General settings

You can check and change the relative and absolute elevation and the representation of the LED strip settings.



2.5. Rendering

Thanks to the practical tools of rendering you can solve the repetitive tasks in the visualization effectively and in some cases in real-time. These are vital in terms of the quality of the final image.

2.5.1. Rendered frame on / off

To set up the views needed for rendering, it is essential that you know when you're setting up your view to see exactly what will appear on the rendered image when you take a certain picture with a certain aspect ratio. In the dialog that displays photorealistic display settings, you can use the "Render Resolution Frame On / Off" option to display the frame for the currently selected mood.



The rendering resolution frame (highlighted with a white arrow).



It is important to note that rendering of the rendering frame is not so much the resolution itself, but rather the choice of the same resolution as the image used to produce the final image is the most important aspect.

EXAMPLE: Everyday workstation renders a lower resolution (such as 854 x 480 - 16: 9 aspect ratio) to reduce the rendering time, but the final image is taken at a much higher resolution (for example, 1920 x 1080 to 16: 9 aspect ratio). Equivalent resolutions represent the same space, so in this case, exactly the same area is visible on low resolution workstations and the final high resolution image.

2.5.2. Real-time Rendering draft mode

Thanks to this new function we can get a quick feedback how those influential modifications can affect the final result in the visualization. All this without having to wait a long time to test the final result.

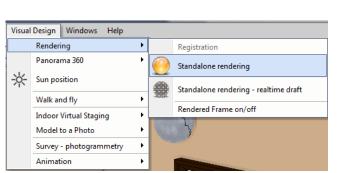
The real time rendering is in constant connection to the content of the actual 3D window, it gives immediate reaction to many modification and presents in short time the draft of final outcome.

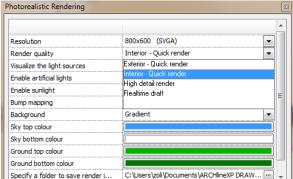
By its very nature, the real-time rendering has the advantage, if you have the ability to see the ARCHLine.XP model and the rendering window at one time. The multi-monitor environment is the most ideal for this.



2.5.2.1. How to start the real time rendering in draft mode

You can start the real-time rendering from the main menu and from the navigation panel, also from any rendering quality mode you can switch to draft mode and back when you want to.





2.5.2.2. Following up modifications

The fundamental feature of the real-time rendering draft is to track the vast majority of the changes executed on the model. Implementing changes will start a new rendering, which is able to provide a well estimated sketch in a short time how changes affect the rendered result.

Tracking of changes is automatically happen, there is no need for pressing a special button. When you remove an item from the model while editing, or even creating new one, or changing the perspective, or switching on or off an existing light source, any of these events immediately initiates a new rendering in the render application of real-time rendering draft mode.







Real-time draft of the current status

Modifying perspective

New draft is preparing

It is recommended to run real-time rendering on computers which has powerful processor and high memory storage (due to its ongoing need for resources). These are essential to present modification on rendering quickly and real-time or with slight delay.

2.5.3. How to finish real-time rendering

Termination automatically

The real-time rendering stops when the progress bar shows the end of the rendering process. In case we make any changes on the model then it restarts automatically.

Termiantion manually

The real-time rendering can be finished by pressing "Exit" button. Any modification happens on the model after that it makes the rendering start again.

Termination by render quality changes

The real-time rendering can be terminated by changes effected on any other settings of the "Photorealistic Rendering". The calculation of the image in this case starts with the selected quality settings on the basis of the actual status. Changes on the model no longer will be synchronized and will not trigger an automatic restart of the rendering process rendering creates images on the traditional way.

2.5.4. Effects

Using certain effects even during the rendering process or on the finished image you can execute such modifications which immediately will appear on the image.

Shadows

Increasing the value of shadows effect you can make stronger the darker shades of the image.







Shadows = 0

Shadows = 30

Shadows= 60

Midtone

By changing mid-tones you can make those tones lighter or darker which were initially not too dark or completely bright. Increasing the value you can lighten, decreasing it you can darken.







Midtone = -50

Midtone = 0

Midtone = +50

Highlights

Altering the highlight effect you can emphasize the light shades of the image such as white ceiling





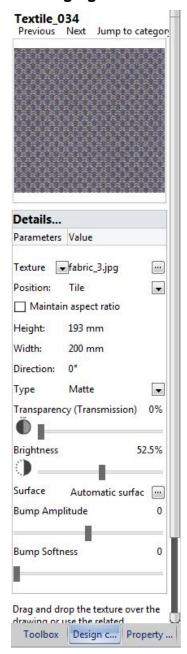


Hightlights = 0

Hightlights = 30

Hightlights = 60

2.5.5. Changing material settings in real-time



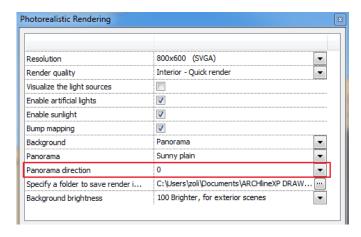
On particular surfaces the represented material settings can be directly modified or edited without opening the dialog window of object settings.

Just right click on the object and select "Find material" command in the appearing local menu. On left side of the screen, in the toolbox will appear a sample of the material and its main properties.

Most of the properties can be immediately changed by moving sliders, pushing buttons or editing values. On 3D view or the real-time rendering image we get prompt response to the changes were effected on material settings and their impact on the visual plan.

2.5.6. Panorama direction

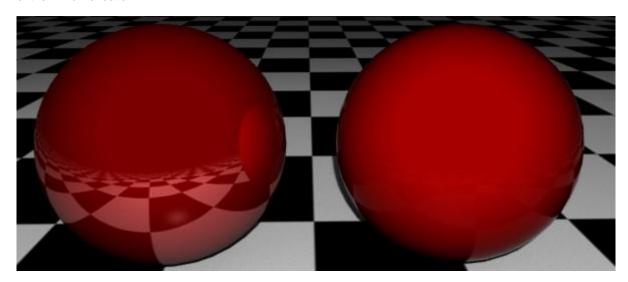
In the model representation we can change the selected direction of panorama (i.e. which part of the image can be seen from a given point of view), the degree of the rotation can be also given in the rendering window.



2.5.7. Fresnel effect

By enabling the "Fresnel effect" we can arrange that the selected material to be able to appear as it can be often observed in the nature. Turning on the "Fresnel effect" function the reflection is lower from a perpendicular view point but the mirror effect is stronger from a lower viewing angle. In the surrounding environment we can discover this effect in many cases and also there are surfaces which at the first sight seems to be matt.

Without the Fresnel effect the reflectance is consistent on the reflective surface, the viewing angle will not affect the extent of the mirror reflection.



Disabled Fresnel effect

Enabled Frensel effect

2.6. Panorama 360 virtual tour

Thanks to "Panorama 360" function you can take from different perspectives a fully surrounded rendering in schematic or photorealistic quality. Linking together more panorama views you can create a virtual tour, this can help your clients discovering the spatial relations, experiencing the size and layout of each room and feeling the cosiness.

2.6.1. Set Panorama Layer

Using this command you place the symbols of Panorama 360 (camera, hotspot, info points) on any panorama layer.

- Click on "Set panorama layer" command.
- Select a layer from the list and press "OK".
 - At the end of the process, every symbol previously placed by Panorama 360 function will appear on the selected layer.

2.6.2. Place Camera

For virtual tours this command helps to clarify the place of camera's viewpoint and its direction in the plan. Here there is also an option to define a series of cameras.

- ❖ To place the camera select "Place Camera" command.
- Press "OK" in the appearing dialog box, to use the given camera symbol.
- ❖ Type the height of the camera, and press "OK".
- ❖ Label the camera with a new name and press "OK".

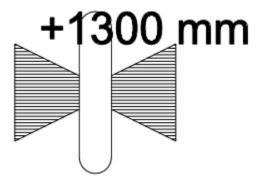
You can add more cameras by repeating previous steps giving them different heights and names; or you can finish placing cameras by pressing "ESC".



The symbol of the camera

The camera can be moved, rotated into other direction or position afterwards. The viewing direction of the camera determines by default which spatial direction is shown by this given camera. As an example, a camera had already been placed at the end of a corridor. Rotate this camera symbol to the preferred direction so now it can show a more attractive view to our client.

2.6.3. Place link hotspot between cameras



The symbol of the hotspot



The symbol of the hotspot on the result

The command allows to place special hotspot on the plan. This point provides the access between certain cameras during the virtual tour. In the virtual tour the hotspot is represented by black arrow pointing upwards.

- Start the Place link hotspot between cameras command. In the appearing dialog box give the height of the hotspot.
- Select the first camera from which view point you want to make visible the hotspot.
- Click on the second camera from which view point you want to make visible the hotspot

Half finished hotspot

While we are creating the virtual tour the software collects from the drawing the cameras, info points and hotspot and checks that the tour contains any half-finished hotspots.

This can happen when we delete deliberately or accidentally a camera therefore the linked hotspot becomes one-sided. When the software finds these half-finished hotspots sends an error message and interrupts the process of panorama view and marks these half-finished hotspots.

For the good visual result always amend the half-finished hotspot by modifying the linked camera.

Checking the accessibility

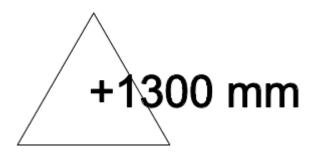
While creating the virtual tour the software automatically checks on the drawing that all cameras are accessible during the tour. In case this condition doesn't meet, the software sends an error message and might interrupt the whole process. The software selects all items which are not accessible from the starting point.

Modifying cameras linked to hotspot

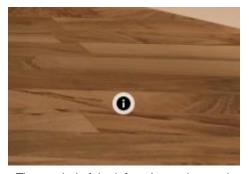
If it is necessary, it is possible to view and modify cameras which already had been set and linked to hotspot. Click on hotspot in the appearing local menu choose "Modify" command. In the dialog box you can see the linked cameras, here you can choose any cameras placed on the drawing.

2.6.4. Place info points

This command helps to place info points with descriptions and on-line reference on the drawing on a specified area. You can define the height, select the camera which will show the info point. In Panorama 360 the info point is shown by a special symbol.



The symbol of the info point on floorplan



The symbol of the info point on the result

- ❖ To place the info point select "Place info point" command
- Press "OK" to use the recommended symbol
- ❖ Type the height of the info point and press "OK"
- Click on the camera had been placed before. This will be the camera from which point of view the info point will be seen.
- Give the description and URL, then close the dialog window by pressing "OK".

More info point can be placed by repeating the steps above described. (Giving, height, selection of camera, giving description/URL)

2.6.5. View Camera- Perspective view from camera viewpoint

Using this command you can see the default image from the viewpoint of the previously selected camera. This command can help finding the proper starting position by adjusting the rotation of each cameras.

- Start "View Camera" command
- Click on any of the previously placed camera icon on the drawing

2.6.6. Build virtual tour

Build virtual tour (draft mode) and Build virtual tour (render mode) these commands create virtual tours in the quality of 3D modelling and photorealistic rendering.



Draft mode



Render mode



2.6.6.1. Build virtual tour (draft mode)

The draft mode is an excellent control tool before creating the virtual tour in the quality of photorealistic rendering. This can be also a unique and fast tool to depict the spatial environment, when there is no need for rendered images.

- Start "Build virtual tour (draft mode)"
- Finally save it on your computer

2.6.6.2. Build virtual tour (render mode)

This tool helps creating the virtual tour in rendering quality. Cameras placed for the tour will display the rendered interior view with previously specified rendering properties.

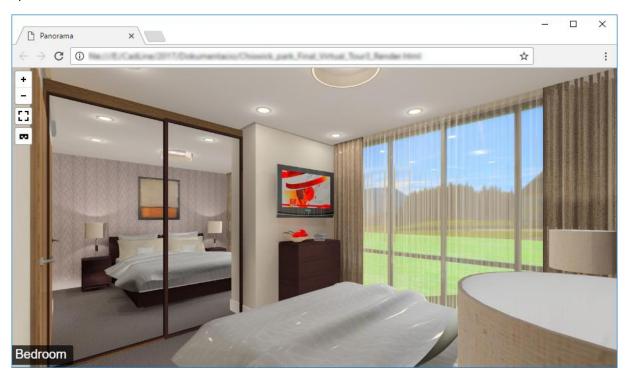
- Start Build virtual tour (render mode)
- Set the parameters for rendering
- The program start creating the rendered quality virtual tour. Six images will be taken by each camera.
- Finally save the file on your computer

2.6.6.3. Share virtual tour

Files are created in Panorama 360 have an html extension. This format can be opened by any browsers on desktop or mobile.

2.6.7. View the Panorama 360

Files created in Panorama 360 can be viewed on desktop or mobile. To see them you only need a browser, which can open the file created.



You can alter the appearing content with icons in the left top corner. In the left bottom corner you can find the name of current camera.



Using some browsers might happen that the Panorma 360 will appear in black and white. At this time please update the page in order to reach the desired representation.

2.6.7.1. **Zoom in and out**

Use the icons in the left top corner to zoom in or out the displayed panorama. On your desktop browser you can also do that with your mouse/scroll wheel.

2.6.7.2. Manual virtual tour

On your desktop browser click and hold down the left mouse button on the area of panorama with no icons and move the mouse left and right, up and down to look around. On your mobile pin on the area of panorama with no icons and move your fingertip left and right, up and down to look around.

2.6.7.3. View around with gyroscope

If your mobile device has a built-in gyroscope sensor, you can allow to look around with using gyroscope.

Enable gyroscopeDisable gyroscope

Enabling this function – either VR or normal mode- you can view around by moving your mobile device from the given point of view. You can terminate the VR with gyroscope by pressing a switch button or just to pin anywhere on the panorama screen.

2.6.7.4. Moving between cameras

Hotspots linked to cameras are represented by black arrow pointing upwards in the panorama. When you look around manually simply click on the hotspot which leads you to the camera on the other side of the hotspot. If you look around on mobile just pin on the screen.

When the virtual tour is operated by a gyroscope you have to target the hotspot with a cursor appearing in the middle of the screen. Successfully targeted hotspot gradually turns into red then the switch happens between cameras. Until the hotspot turns completely red by looking any other part of the panorama you can abort moving to other place.

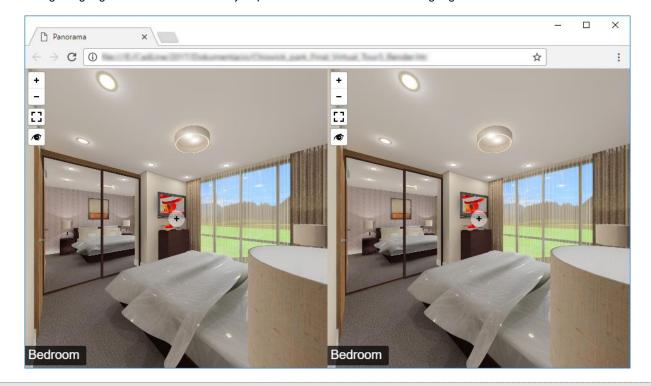
2.6.7.5. VR mode and Normal mode switch

This switch allow us to move freely between from one mode to the other depending on demand. In VR mode the represented content will appear in double, which is optimized for mobile VR googles.

Switch VR mode

Switch Normal mode

Using VR googles set VR mode before you place the mobile device in a VR googles.





Using VR googles it is advised to enable gyroscope for the desired experience.

2.6.7.6. Full screen switch

There is an option to turn the default view to full screen view by using this button.

Full screen view
Default view

Full screen view the panorama fills the screen entirely, you can only see the essential tools, icons. Stepping out from the full screen view you can find again the browser's other functions (menu, heading, etc...).



2.7. Material settings

The next and very important factor in the visualization the way to depict materials and textures: supposing that the surface doesn't reflect true to life, or an object is not realistic enough (e.g the presenting porcelain) that can spoil the quality of visualization. That was the main reason we further developed the texture management in ARCHLine.XP 2017 version. The new version contributes to get even more photorealistic rendering images with the following way:

- Direct settings of textures in Design Centre, which immediately appears in Real-time rendering mode. Glossy and matte finish, transparent or reflective surface can be defined precisely.
- New material settings: False emissive, True emissive, Porcelain.
- New special materials: White ceiling, Porcelain white.
- New property: Fresnel effect the observation that the amount of reflectance you see on a surface depends on the viewing angle. Without the Fresnel effect the reflectance is consistent on the reflective surface. Applying this new property the consistent reflective surface can vary according to the viewing angle of a 3D surface.

2.8. Mosaic tiling

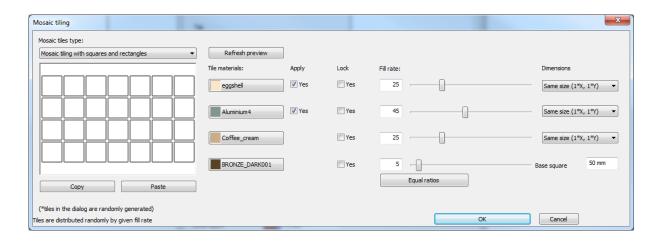
This new tiling method help us to create detailed and diverse tiling styles with no repetition.

Mosaic tiling is perfect use in bathroom or kitchen backsplash providing a unique look. Create a mosaic of randomly generated patterns of the same size tiles using maximum four types of material or using four different sized tiles.

- Randomly generated tiling with four different materials or four different sized mosaic tiles.
- Square or circle shapes for tiles.
- The frequency of the tiles can be adjusted.
- The exclusive tools for designing a unique bathroom, with this tool it is possible to cover any different surfaces with randomly generated pattern.



In "Tiling parameter" dialogue window click on "Mosaic tiling" button. Now a new dialog window will appear for "Mosaic tiling", here you can set the parameters of this tiling method.



Mosaic tiles type:

In the drop down menu you can choose: "Mosaic tiling with squares and rectangles", "Mosaic tiling with circles" and "Mosaic tiling with hexagons". This setting are to define the shape of tiles.

Tile Materials

For mosaic tiling you can use up to four materials. Clicking on the material will bring up the "Material" dialog window and there you can refine the material. On the buttons, you can see the preview of the currently selected materials.

Apply

As you can see in the "Mosaic tiling" dialog window, beside two tile materials you can find check boxes under "Apply" column. When these are disabled, that the linked tiles will not be used in the mosaic tiling.

Fill rate

The selected tiles will be displayed by a random fill rate. Also you can define manually this rate by typing the percentage in the input fields or moving sliders instead. With the **Equal ratios** button you can set equal fill rate for each material.

Lock

You have an option to lock the fill rate or position of the slider. The locked values will not be changed in case you want to modify the others' fill rate.

Dimension

In this column, you can specify the dimensions of each tile involved in mosaic tiling. The bottom material defines the base square tile. In the *Base square* input field, you can specify the size of the smallest square tile in mm. For the other materials you can apply multipliers in X and Y directions by selecting the desired multiplier from the belonging list.



Refress preview

The left side of the "Mosaic tiling" dialog window shows the preliminary view of the random tiling style. When you refined the settings of the mosaic tiling you can check the result by clicking on the "Refresh preview" button.

Copy/Paste

The "Copy" function saves the actual settings. At any time you open the "Mosaic tiling" dialog window then you can always upload these saved settings by pressing "Paste" button.

2.9. Tiling advancement- Quick tiling in 3D

- Tiling design commands directly can be reached in 3D window by right clicking on tiles.
- · New command: You can move the tiles in one step by rotating left, centre, right reference point of the tile.
- The replacement of tiles is now possible.
- Modification of tiling style in one step.
- · Simplified the removal option.

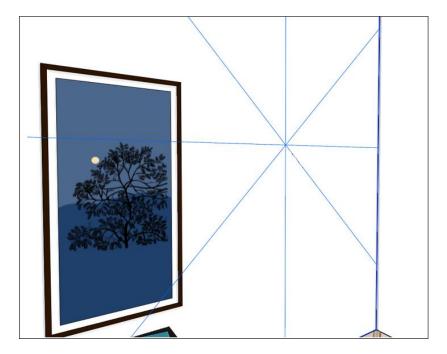


2.10. Designing 3D shapes

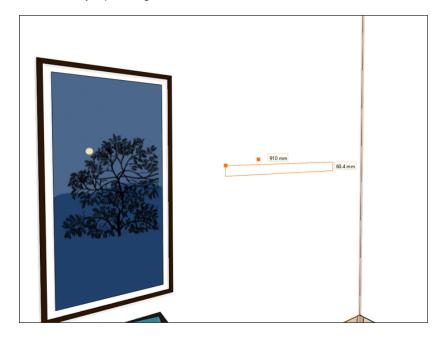
The tool of "3D shapes" helps to expand a drawing into a 3D object in 3D window, which later can be edited right inside the 3D model in a very flexible way.

2.10.1. Create a 3D shape in 3D window

- ❖ Make sure that 3D window is activated, then start 3D shape tool
- Move the cursor to the requested place. When software recognizes the 3D surface then its marks it with crossed click there.



Create directly a plane figure with mouse to the surface selected before.



❖ Moving the mouse you can give the direction of pulling out or type the value and hit "Enter" create the 3D figure.



This way the created model can be edited freely.

2.10.2. Modifying 3D shapes in 3D view

By selecting the ready 3D shape, you have option to modify profiles of 3D shape and change its sizes.

Each profile defines the 3D shape and overall dimensions become visible and editable by selecting the 3D shape in 3D window.

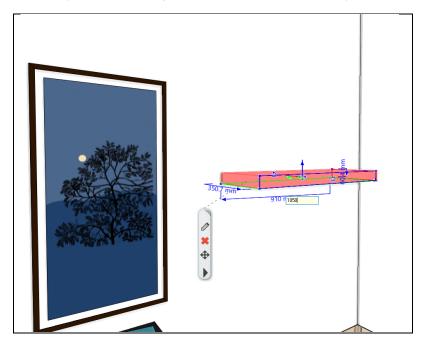
Modifying profiles

- Select the 3D shape you want to modify
- Click on the edge or nod of any created profiles then choose right one from the appearing local menu

These modifications will be visible straight afterward.

Modifying the overall sizes

- Select the 3D shape you want to modify
- Click on any values appearing around the 3D shapes and modify it, then press "Enter".



These modifications will be visible straight afterward.

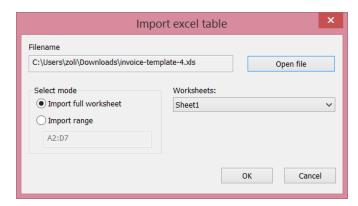
2.11. Importing Excel spreadsheet tables

Data can be imported from Excel worksheets as text table into ARCHLine.XP 2017.

By importing an Excel spreadsheet, you can include information from an entire worksheet, or part of a worksheet, referred to as a named range.

Start the command from File menu - Import – Excel Table or Drafting menu- Text- Excel table. In the dialog window "Import Excel table" follow these steps:

- Click on "Open file" and select a file with .xls or .xlsx extension.
- In the Worksheets drop-down list you can see the names of sheets in the selected Excel file. Select a worksheet.
- Choose "Import full worksheet" option or
- Choose "Import range" option, then specify that range of cells on the Excel worksheet you want to import (e.g. C4:G36)
- Press "OK"
- Place the table to right place by moving your mouse.



The import keeps all characteristics such as height, type, colour, alignment, but loses cell properties such as borders, fill colours.

Excel spreadsheet tables are linked to the original Excel file. It means if a linked spreadsheet has been changed, such as a row or column has been added, the table in ARCHLine.XP drawing can be updated accordingly.



NOTE: The XLS file is only linked but not embedded. If the Excel .XLS file path is not available for any reason on the computer that is performing the data extraction, a data link cannot be established.

Update Excel file

The content of the linked Excel table can updated by selecting the command "Update Excel" in the appearing local menu. It may change the size of the table.

Style	Picture	Width [m]
1 layered 38 wide wall		0.380000
Value	Description	Categorize in IFC as:
		9
	IFC name of the object	IfcLabel
	Description of the object	IfcLabel
	Manufacturer	IfcLabel
	ArticleNumber	IfcLabel
	Price	IfcLabel
1	. layered 38 wide wall	/alue Description IFC name of the object Description of the object Manufacturer ArticleNumber

Open Excel

You can always open the linked Excel file if you select "Open in Excel" from the local menu of table.



2.12. Import PDF geometry

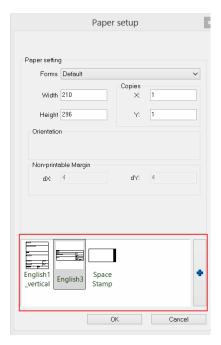
ARCHLine.XP 2017 importes the geometry, and TrueType text from the given pages of PDF files. Fast, accurate way to reduce to minimal the time is spent on processing architectural file in PDF.

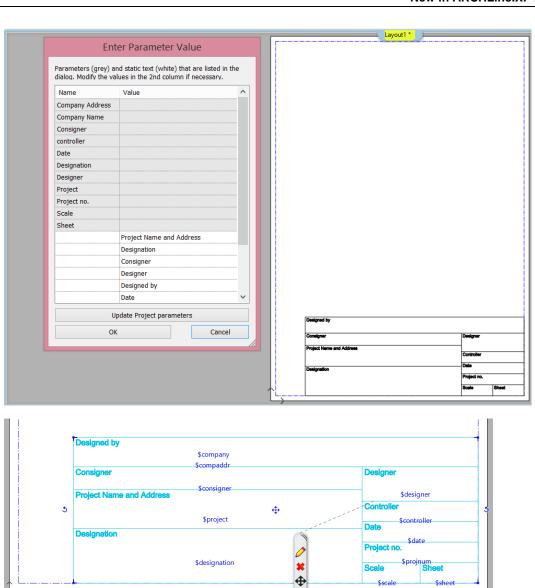
- You can import the content of PDF file not only as a picture but as a scalable and modifiable line.
- ❖ Geometry import visualizes lines and polygons with a given colour and line weight.
- The imported floorplan can be re-scaled to 1:1 (if the scale factor is 1:100, we need 100 times bigger enlargement).
- Start File menu Import PDF Geometry command, and choose a PDF file.
- Place the imported drawing with the appropriate location by moving with mouse cursor.

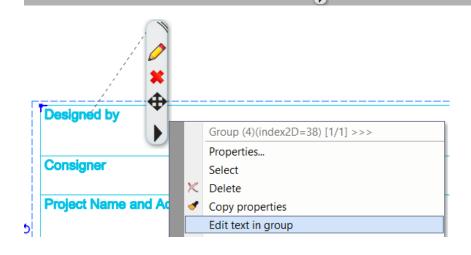
The geometry import mean lines and polygons with the given colour and line tickhness. The colour of the items are coming up in different layers.

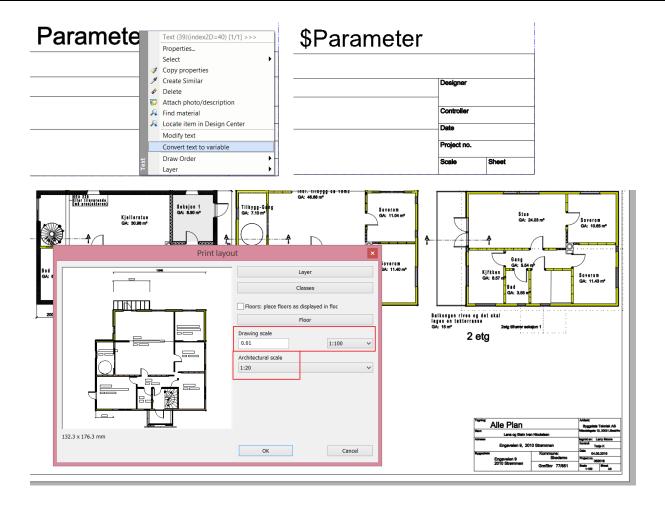
2.13. Printing layout improvements

- Printing layout dialog is extended with default Stamp definition.
- Autofill and automatic placement of default stamp.
- New command to edit text parameters in a group. All texts are editable with markers, it can be parametric or static text either. Right click on the stamp, choose "Edit text in group" command from the appearing local menu.
- Enhanced stamp filling dialog with the list of static texts.
- * New command: Convert text to parameter. It converts the static text into a parameter starting with \$ character.
- The boundaries of the drawing on the printing layout can be edited freely. This helps to remove unnecessary drawing details without editing the original.
- Time stamp helps to compare the drawing placed on the printing layout to the status of the source. In case the source is more recent, then clicking on the drawing the software offers to refresh the drawing displayed on the printing layout.
- Separated Architectural Scale factor. Managed independently from drawing scale.







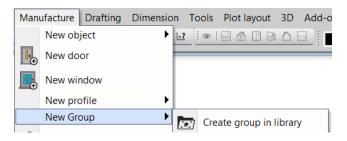


2.13.1. How to create custom plot stamp?

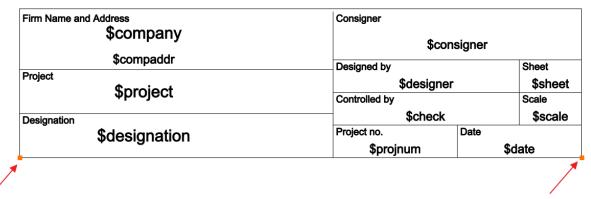
You can create a custom symbol/stamp by the following steps.

If you add texts starting with \$ character. ARCHLine.XP will manage it as a parametric text and your custom stamp works as dynamic stamp.

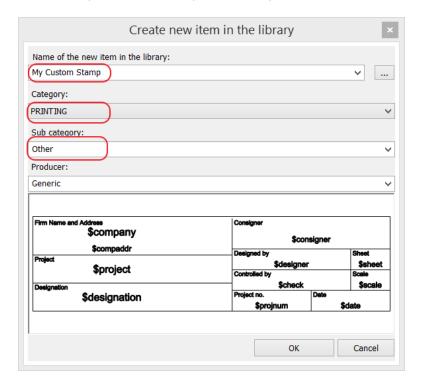
- Draw a rectangle with real 1:1 stamp size, e.g. 190 x 50mm.
- Draw the cells with line tool.
- Add the texts starting with \$ character you want to change the content when you place it from the library.
- Add regular texts, bitmaps, etc. and other element you wish to keep constantly.
- Save it as a new group. Choose "Create group in library" command from the menu "Manufacture New Group".



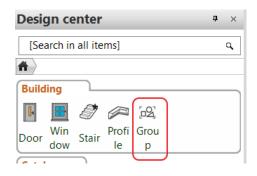
Select items and close selection by pressing "Enter". Give at least two reference points and press "Enter".

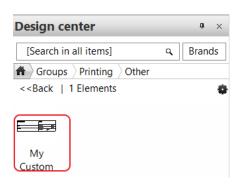


• Fill the following fields: name, category, sub-category and producers in the appearing dialog window.



 The customized stamp can be found under Desing Centre – Building – Groups - Printing and within the category of Hungarian.



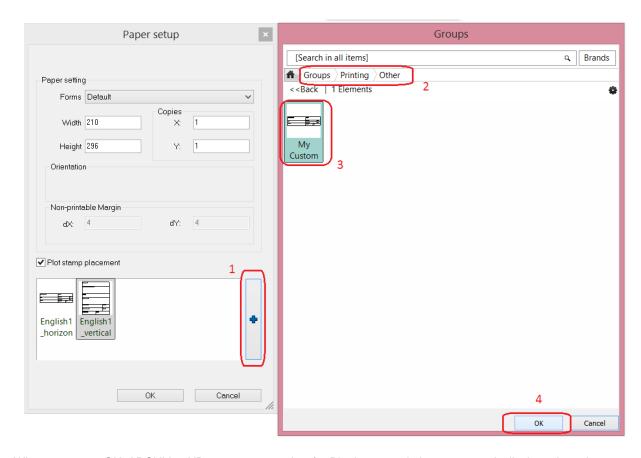


2.13.2. Add the new stamp to the list of Favourites

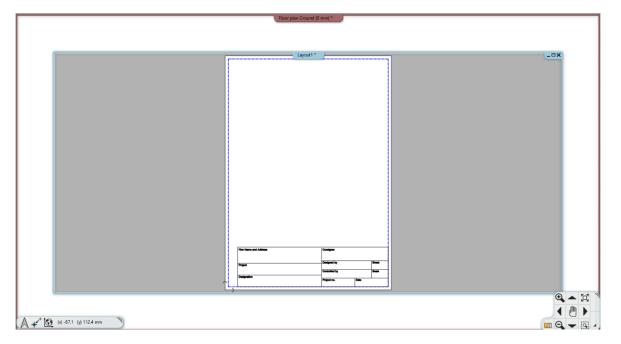
• Start Prepare Plot layout command from Documentation menu.



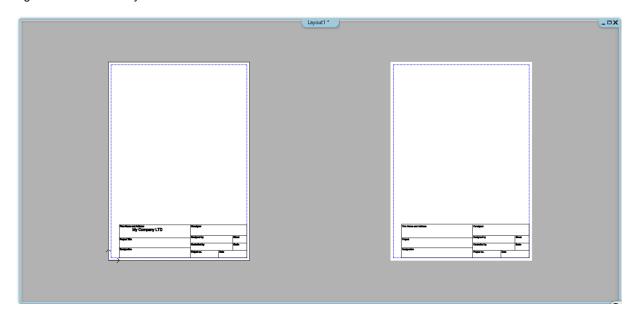
• Add the new stamp to the list of Favourites.

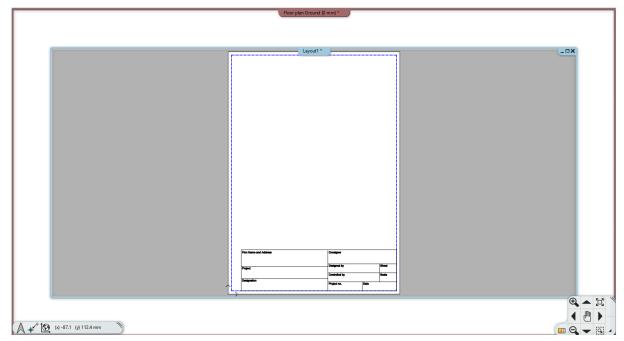


 When you press OK, ARCHLine.XP creates a new view for Plot layout and places automatically the selected stamp on the layout bottom side.

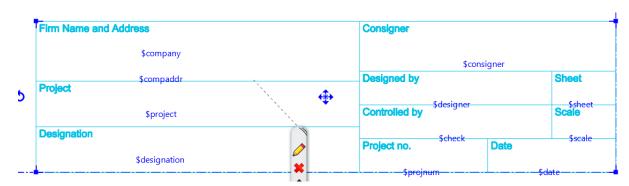


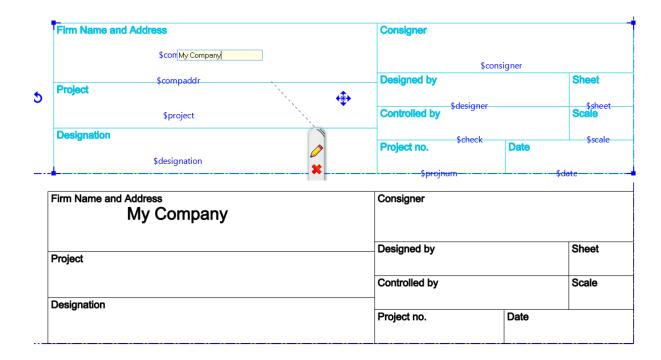
 If you start Prepare plot layout command when the Plot Layout view is active the new layout is placed automatically on the right side of the last layout.





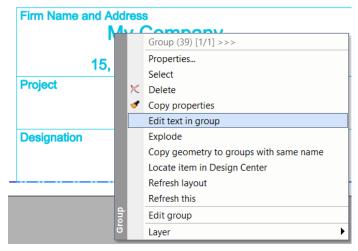
• Click on the stamp. The parametric texts appear in blue. You can modify these parametric texts marked in blue, click on them and type the new content, and finally press "Enter".



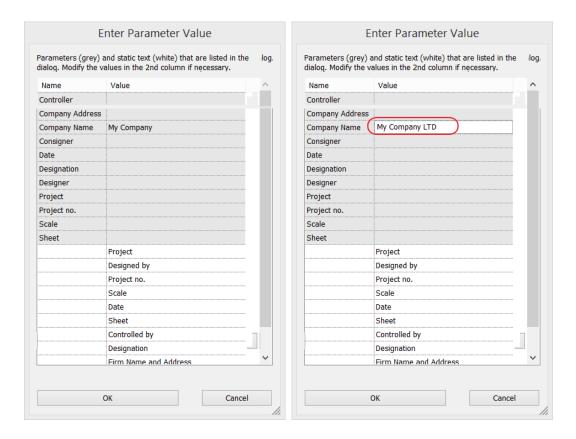


2.13.3. Edit text in dialog window

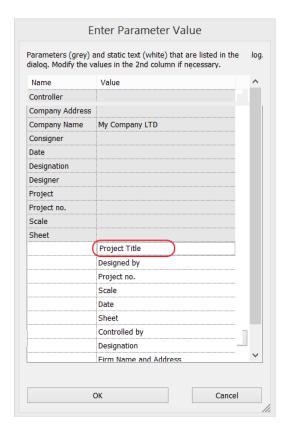
• Right click on the stamp, then choose from the local menu "Edit text in group" command.



• The parametric texts are marked in grey. Click on the value field and type the new text.

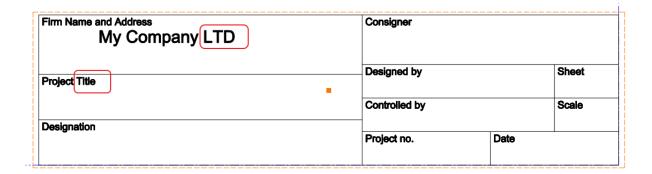


• The regular texts are in the white zone. Click on the value field and type the new text.



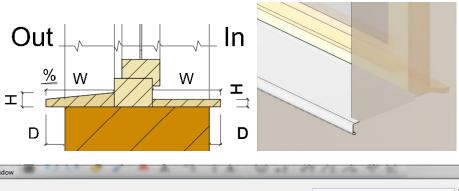
• Press "OK" to close the dialog window. The stamp will be updated.

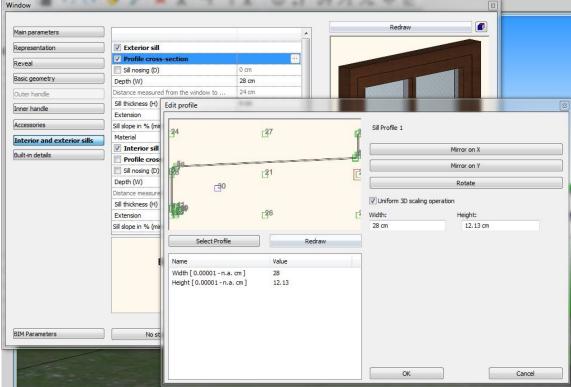




2.14. New window property: angle of window exterior/interior sill

The exterior and interior window sill angle can be defined between 0 and -10 degree. We can choose from several default window sill profiles and its size can be customized.



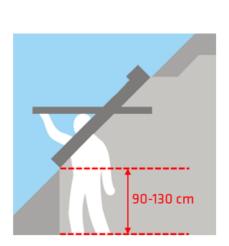


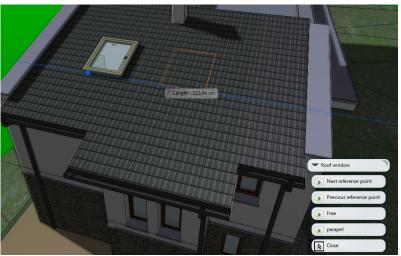
2.15. Sill height in roof window properties

In addition to the traditional top view placing of the roof window there is an opportunity to insert it according to the measured parapet height on site.

In order to position a roof window precisely in space, the height of parapet can be give as a property of the roof window. When placing a roof window the parapet height is taken into account as default and the window can be placed along the "Blue" line representing the parapet height.

This setting can be dissolved by clicking on the roof in 3D window then the "New roof window" menu appears. Choose "Free" option to move the roof to the requested place manually or "Parapet" to type the requested value for the parapet height.



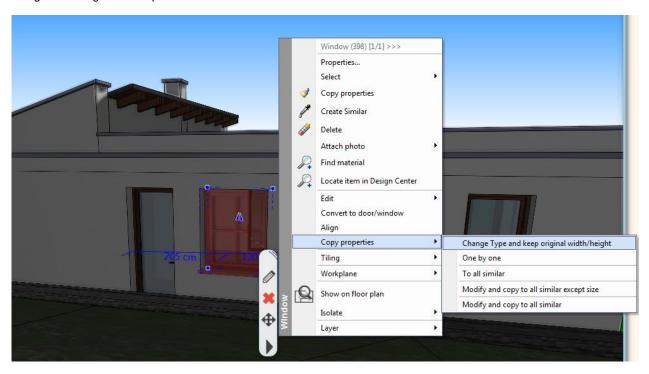


2.16. Replace door and window by keeping the original bounding size

By the size keeping replacement of certain type of doors and windows, the subsequent modification on the drawing becomes easier. We can replace previously placed doors and windows by using this new function that those bounding size will not change.

This way we can modify easily more windows and doors at the same time which significantly reduces the time spent on frequently occurred type changes during any stages of planning.

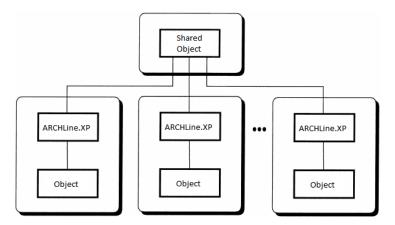
This method is extremely useful when we have to work with unknown content or deal with drawings designed by another designer colleagues to be processed.





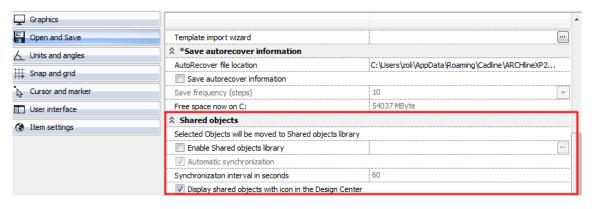
2.17. Shared objects

Shared objects gives you the possibility to keep the most commonly used objects organized in a central place, usually on local servers or the popular cloud-based file sharing services like One Drive, Google Drive or Dropbox. All users in a local network can access these objects, making unnecessary to download/import them on each computer where ARCHLine installed.



2.17.1. Shared object folder and options

First you have to set the path to the shared objects repository in File menu – Options – Open and Save page – Shared objects group.





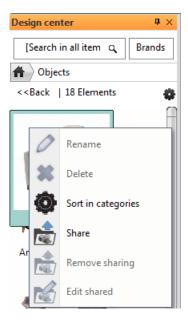
- Enable the Enable Shared objects repository option with its checkbox and then use the ellipsis button to select a folder, preferably on the local network.
 Shared object repository can be:
- folders on your local computer,
- a mapped network drive and its subfolders,
- any cloud-based file sharing services like One Drive, Dropbox, Google Drive,
- any other folder via VPN connection.
- Switch on the Automatic synchronization option if you like to refresh the content of shared object repository. This
 synchronization works only with live internet connection and generates data traffic on the internet.
- You can set the *Synchronization interval in seconds*. This value defines the interval between the finishing time of previous synchronization and starting time of the next synchronization.
- Enable the *Display shared objects with icon in the Design Center* option if you want to visualize the difference between shared and local objects in the Design Center. In that case, an arrow appears at the top-left corner of the icon of the object in the Design Center.

2.17.2. Sharing objects

You can share one or more items of an object category in the Design Center

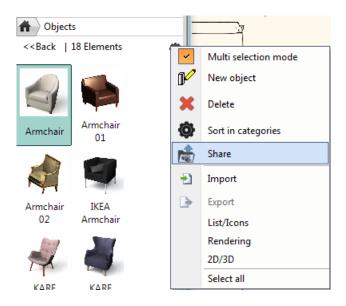
Sharing a single object

- Select the object in the Design Center
- Click on Share in the local menu



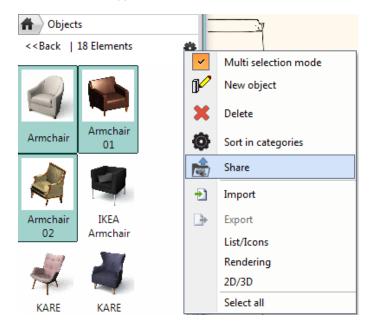
or

Click on the cogged wheel icon and then click on "Share"



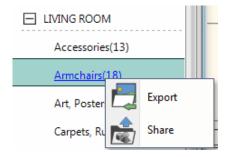
Sharing more objects in a category

- Select more objects in a category.
- Click on the cogged wheel icon and then click on "Share".



or

- Right click on the category name in the Design Center.
- Click on "Share"



2.17.3. Remove sharing from shared objects

"Remove sharing" command acts the opposite way of "Share". You can disolve sharing of one or more objects in a category. You cannot remove the sharing of the entire category.

To remove sharing,

- · Select one or more shared objects in a category.
- Click the cogged wheel and then click on "Remove sharing".

2.17.4. Object sharing rules

- If you share objects through a shared objects repository and you lose the connection to the repository, then the previously shared objects will be still visible in the Design Center. In that case, a temporary copy of shared objects created in the background on your local machine and you can continue your work without being affraid of losing objects.
- Shared objects are not editable.
- If you remove sharing of an object, the object turns to local object and becomes editable.
- If you use shared objects in a project and you save this project, all shared objects will be saved into this projects, similarly to local objects that are used in a project.
- If you use shared objects in a project and change the shared object in the Shared Object folder, the changes will be visible in the project.
- Countertop and Wardrobe wizard objects are not shareable.

2.18. Project-specific object management

Project-specific objects are those objects that come with a project. Without the use of project-specific object management, when you save objects into a project and you open that project on another computer, ARCHLine populates the Design Center with objects found in the project. As the time passing by, lot of objects may appear in the Design Center, requiring a huge amount of disk space on your computer and resulting messy object libraries. You can delete unnecessary objects from the Design Center, but those will be there again by opening project which includes the unnecessary object. To avoid the accumilation in object libraries in the Design Center, you have the possibility to remove project-specific objects stored only in the project from the object libraries by exiting from the program. To do this, use the *Project-specific object management* option on File menu – Options – Open and Save page.



Project-specific object management option setting takes effect at restarting the program.

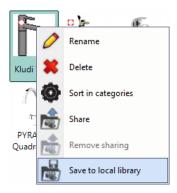
2.18.1. Project-specific objects in the Design Center

When you open a project, all objects that come with the project can be found in Design Center – Objects – OTHER – Project - <ProjectName.pro> category, where <ProjectName.pro> stands for the project name. If you use the project-specific object management option, you can see a denotation on the top-left corner of the icon of the project-specific objects in the Design Center:

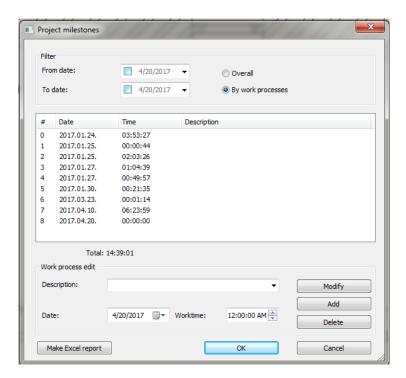


These are so-called temporary objects, which means that by exiting from the project you lose the project-specific objects for further use when you open another project or start a new project. However, if you feel a project-specific object worth for further use, you can save it into your local object libraries or share it with the **Save local library** and **Share** commands, respectively:





2.19. Projekt mérföldkövek Project milestones



This new function can be found under "File-BIM-Project milestones".

ARCHLine.XP CAD design software automatically follows and records the time was spent on the project. It takes as basis the time passed between project opening and its manual saving. These recorded data are editable and can be extended with further milestones.

2.19.1. Views



There are two approaches in work process documentation which can be selected in "Project milestones" dialog window by selecting "Overall or By work processes".

2.19.2. Recording the time is spent on working on a project

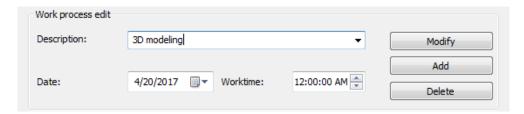
A new work session starts when you open a project. If you save a project manually, then the linked working hour counter automatically refreshes. In case you work on more projects on the same day and you return to them from time to time then these are defined as new working sessions which are recorded as well.

The software helps to facilitate to record time with the above mentioned simple but hands-on approach, which later can be further specified or completed with data as per requests.

Automatic recording

The fundamental starting point of "Project milestones" is the date and time of opening a project. If we open a project and manually save it, then the time spent working on this project automatically will be increased and saved with the project. Time elapsed between subsequent savings will increase total working time. The programme automatically records the work process without any detailed description, which later can be added.

Manual recording



"Work process edit" enables to add new work process. The manual recording is useful to register such events which are carried out during the project. But due to the nature of these events, the time spent on cannot be directly counted and added to the project file (e.g. building survey)

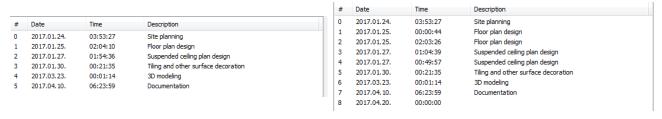
- Choose "By work process" option.
- ❖ Select or type the details of the work process such as description, date and worktime in the "Work process edit" section.
- Press "Add" to record the previously uploaded work process.



Important note: The software allows overlaps between working hours. Therefore these sessions will appear in the work time summary (e.g. one colleague consulted on site while the other colleague edited certain parts of the project). If you want to avoid unwanted overlaps, always check the recorded data before using them.

2.19.3. How to view the Project milestones?

The recorded data of the currently opened project can be viewed by clicking on the "Project milestones" command in the main menu "File-BIM". By choosing "Overall" filter then you can check the details of the daily breakdown. If you choose the "By work process" filter then the details of work session will appear.



Overall view By work process view

2.19.4. Editing work process

There is always a possibility to modify the description, worktime, date of a work process which was automatically generated or previously created/added - in overall view only the description is editable. The latter will be the most useful, when you like to add description to the automatically generated notes with no description.



It is good to know that in the "Description" field you can choose not just from the given list but also you can create new ones. (e.g. consultation via Skype) These individually typed descriptions will be noted in the project by the software. Next time if you like to use these new descriptions you just simple choose these items from the upper part of the extended list.

Modifying work process

To modify already existing work process please do the followings:

- Select the work process on the list
- Modify the "Description", "Date" and "Worktime"
- Press " Modify" button to save changes



Modifying notes

To modify in group the description of overall work process please do the followings:

- Select the work process you want to change from the list
- Modify the description
- Press "Modify" button to save changes
- A "Message" will appear to confirm the changes. If you choose "Yes" every independent notes linked to the overall work process will get the new description.

2.19.5. Deleting work process

To delete an existing work process please do the followings:

- Select the work process you want to delete
- Press "Delete" button in the dialog window

2.19.6. Make Excel Report

The collected work time data in a project can be further processed by exporting them into an Excel file. To aim this please do the followings:

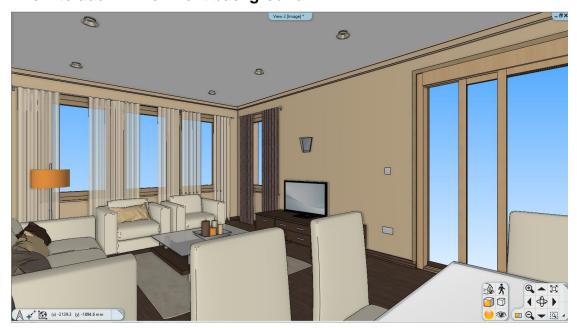
- Press "Make Excel report" button at the bottom of the dialog window.
- Give the location and the name of the file and press "Save".

If you have a program which is able to handle/edit Excel files, after finishing to save the file, then the saved Excel file will open automatically and be ready for editing.

2.20. Environment background

HDRI images provide realistic backgrounds to 3D perspective views even in the design phase in ARCHLine.XP. HDRI images are special 360 degree images of background imagery such as skies, landscapes and buildings. If you want to use the HDRI as background, all you have to do is to activate Environment Background and load it in the Environment Options dialog.

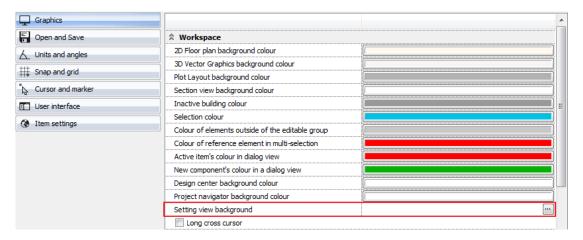
2.20.1. How to add Environment background



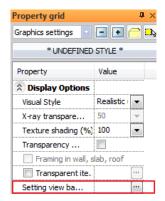
- Activate the 3D image window
- Set a perspective view
- · Click the header of the 3D image window and select Environmental background or



• Go to the File menu - Option - Graphics tab - Workspace - Environmental background and click the ellipsis button or



• In the Property Grid – Graphics settings click the checkbox for Environmental background, then click again on the ellipsis button on the right side.



The Environment Background options dialogue appears.

• Select the desired Background option from the drop-down list. You can select from Uniform, Gradient, Image and Panorama options. The preview of the selected background appears on the bottom-left space of the dialogue.

Unifrom

In case of Uniform background selection, you can select one colour for background. The selected colour is represented on the colour button.

• To change the selected colour, click the Colour button and select a colour from the available colour schemes.



Gradient

In case of Gradient background selection, you can define different colours for sky top, sky bottom, ground top and ground bottom. The selected colours are represented on the colour buttons.

To change a colour, click the colour button and select a colour from the available colour schemes.

Image

In case of Image background selection, you can select an image for the background. Five built-in images are available in the Printer Raster drop-down list:

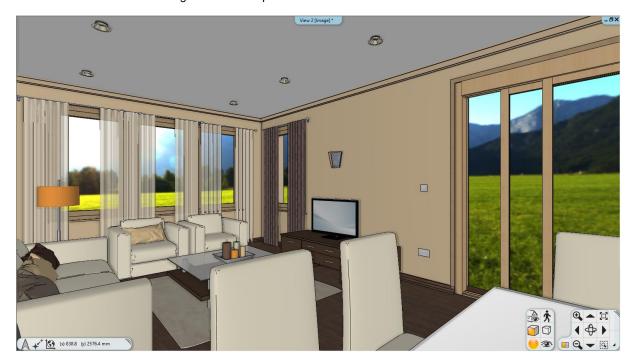
- . City sky- Cloudy
- City sky at night
- City sky at sunset
- Cloudy blue sky
- Starry night
- Select Custom Background Image from the drop-down list if you want to specify your own image.
- Click the Filename with path ellipsis button and browse for the desired image file.

Panorama

In case of Panorama background selection, you can select a Panorama image for the background. Three built-in images are available in the Panorama drop-down list:

- . Hills in the distance
- Just outside the town
- Sunny plain
- Select Custom panorama from the drop-down list if you want to specify your own Panorama file.
- Click the Filename with path ellipsis button and browse for the desired HDRI image file.
- Specify the Panorama direction from the drop-down list. This value turns around the panorama so you can see the desired part of the background in the actual perspective.

The view should come out looking like this example below.



Walking in the scene the environmental background changes according to the movement.



Note To refresh the background image according to the settings you made in the Environment Background options dialogue, click into the 3D window or change the perspective.

3. BIM Standard and certified IFC export and import

The BIM is rapidly gaining ground in the next architectural of and construction projects.

The BIM is an intelligent planning process. Using BIM means effective plan documentation and receiving, managing and transmitting the project data. The BIM helps the designers to collaborate in the project, and business co-operation.

The BIM's standard file format is the IFC, that contains all gathered and added information in realtion to the building and this format can be used during the whole lifetime of the building.

IFC format is univesal and neutral data format, which currently is considered as the standard of industry data exchange. The most valuable feature of IFC format is that architectural elements retain their type and properties in IFC file. The wall, ceiling, etc. is read in other BIM software remains wall and the ceiling too . They keep the same characteristics, although minor compromises might occur in the present state of technology.

The IFC-based data exchange quality exceeds significantly the information content of DXF or DWG-based data format which is the currently wide-spread.

ARCHLine.XP 2017 earned the certificates of IFC Coordination View 2.0 Import/Export. ARCHLine.XP 2017 to support the standardized file format IFC 2x3, which the high-quality 3D model and data transmission/reception between different CAD/BIM design software is feasible.

Thanks to these developments you take over floorplan with the entire 3D model at very higher level than before from designers who are using other software (ArchiCAD, Revit, Allplan, ...) and pass over to other designers even complete buildings.



4. Revit RFA, RVT into ARCHLine.XP

ARCHLine.XP 2017 users can import and view of the RVT, RFA files types.

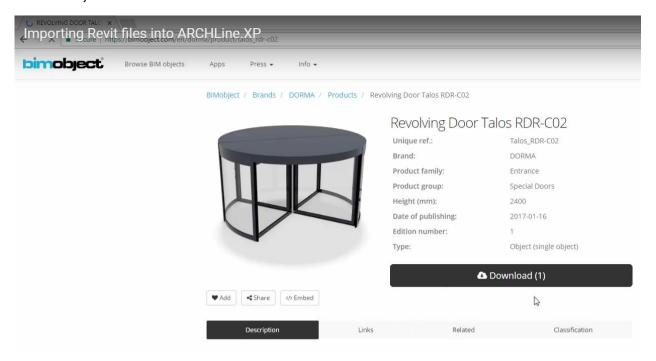
RFA (Revit Family) is the format of families of the BIM application Autodesk Revit. RFA objects carry BIM parameters about the object.

There are plenty of objects downloadable from manufacturers in Revit format. One of the most comprehensive BIM library is the Bimobjects.com.

After downloading and extracting from .ZIP file you can open the RFA file in ARCHLine.XP (e.g. by simple drag-n-drop) using the menu File > Import > RFA, RVT command.

You can convert then the imported items into ARCHLine objects, doors, windows together with the original Revit family BIM parameters.

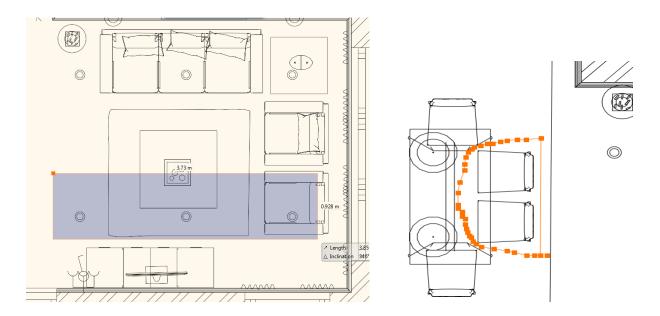
Use the command Manufacture > New object > New object for ARCHLine object conversion and Manufacture > New door > Convert object to door for ARCHLine door conversion.



5. More improvements

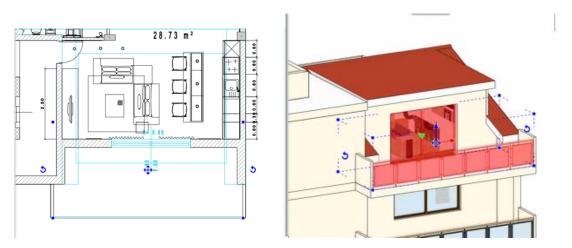
5.1. Multiple area and lasso selection

- Area selection can be repeated
- · Lasso selection: a newer, more comfortable way of selection which is useful in many cases
- Selection in multiple windows: in 2D and 3D as well



5.2. Display selection on more window 2D / 3D

The selection is displayed simultaneously on the 2D / 3D window.



5.3. Excel list expansion

- · Excel lists custom header and footer.
- A new excel furniture list by manufacturers.
- The size of the cabinet length / height can also be adjusted by markers.
- Excel export headers, footers, project data.

5.4. Edit object

- Edit 2D display.
- Change Material.
- Assigning BIM parameters
- "Resave"

5.5. Backup Archives

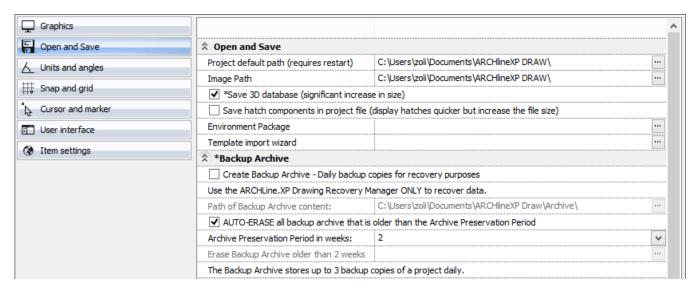
The "Backup Archive" function in 2017 version archives not the drawing file (.asc) but the entire project. One project can be archived 3 times a day.

The first project copy of the daily archive is protected, cannot be overwritten. The second and third copies will be archived only when one hours elapses between two saves.

This is a protective mechanism on those cases when the project is damaged for any reason, or unplanned item deletion or movement happened.

The content of ARCHIVE folder can be removed with AUTO-ERASE option, and you can decide to keep the content of the last 2,3,4,8,12 or 52 week. The deleted items will be moved to Recyce Bin. See the new control in File menu / Option dialog / Open and Save panel.

The AUTO-ERASE option is valid for ARCHLine.XP 2017 release backups only, and you can delete manually if the AUTO-ERASE option is in OFF state.



Drawing recovery manager

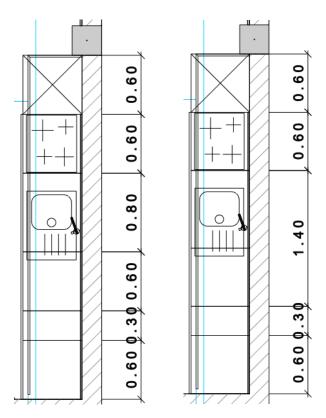
This command is relocated from "Tools- Accessories", it got a new name and its' function has changed compared to the version 2016.

Here you can search for projects and drawings in the selected folder or subfolder, also in the Archive.

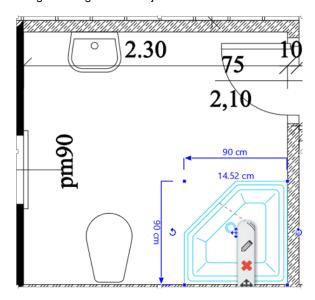
5.6. Other developments

- · Moving / copying the new object remains active.
- If you remove a data from a Serial dimensioning, it will be deleted from the series and adjacent dimensions will be changed. The pinpoint always determines the side which will merge, it always compared to the halfway point
- The click point determines what will happen when you delete a dimension.
 A dimension from the chain of dimensions is deleted by clicking on the first third or last third of a scaling. By clicking on the middle third, the dimensioning location remains blank.

A small triangular marker will indicate the join beyond the dimension witness line in the direction of the combined dimension.



Lengths / height of the object can be set markers.



- Scaling Horizontal / vertical scaling icons series. Columns and beams embedded into wall can be moved, copied separatelly with marker commands in one step.