TABLE OF CONTENTS

1 WHAT'S NEW IN VERSION 13

1.1 ELECTRICAL PLANNING WIZARD

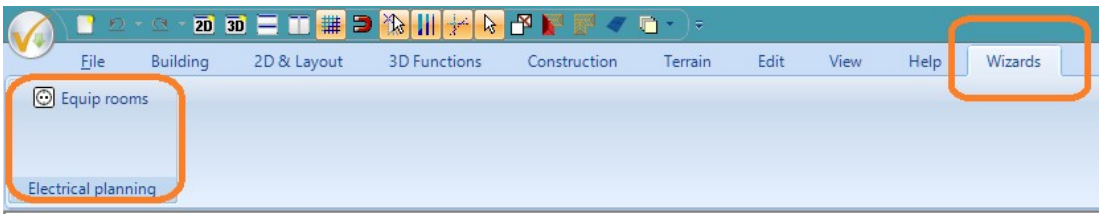
These functions may not be available in all our product variants, but are reserved for the Professional and Premium versions. If in doubt, please ask our sales or support team.

1.1.1 General information about the electrical planning wizard

You can find the electrical planner on the newly created "Wizards" ribbon, which we have provided for additional and future plug-ins. It creates a so-called group with initially just one button for equipping the rooms.

The assistant itself is primarily used to quickly and easily insert 2D symbols of sockets, switches, lights, etc. into the project, place them and use them in 2D views. So as soon as your building or floor plan planning is complete, you can equip the entire building with electrical symbols in a very short time. As a result, you can export an item list based on your planning and as usual the drawings themselves.

2D symbols and 3D objects from our standard catalogs are used for this feature.



The electrical planner itself is not intended to carry out professional electrical installation. It also does not generate automatic wiring, i.e. no connections between the 2D symbols.
It is designed as an input and evaluation aid so that users do not have to click through the catalogs hundreds of times and drag and drop 2D symbols into 2D views.

1.1.2 When do I use the electrical planner assistant?

The wizard should be used at the very end of your building planning, when the floor plans of the buildings have been finally planned, the rooms have been created and named. And not in between or when changes to the floor plan create new rooms or existing ones are removed.

When started, the electrical planner reads the project structure and also the rooms, and subsequent changes can result in rooms that were previously equipped with electrical symbols no longer existing and the electrical symbols therefore lose their connection to the rooms.

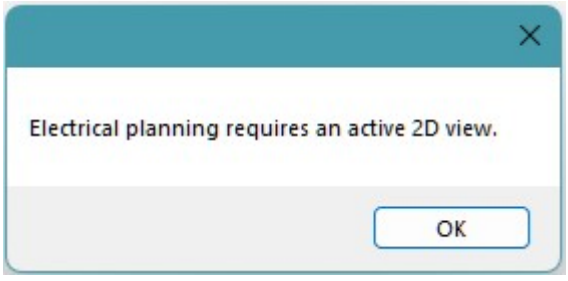
1.1.3 Recommendation for using the electrical planning wizard

To use the wizard, we recommend the following procedure:

- First, complete the entire floor plan of your building and name the rooms.
- Use the electrical wizard floor by floor. To do this, make all buildings and floors invisible except one in your currently active 2D view. This is done via the project viewer on the right side of the software, which manages the project structure
- When started, the electrical wizard reads the visible floors and rooms and lists them in its own tree
- Select the rooms one after the other and assign a room type and an equipment variant
- Optionally, you can now roughly place the electrical symbols in the preview
- Simply keep all symbols that you do not need in the assignment for now. Detailed adjustment of the equipment for each room is unnecessarily time-consuming at this stage.
- After the wizard has inserted the symbols into the project, you can easily select and delete unwanted symbols or add more symbols from the catalog
- Only create a user-defined variant if you use recurring equipment variants
- Exit the wizard, save your project
- Make the next floor visible in your 2D view and start the wizard again to equip the next floor

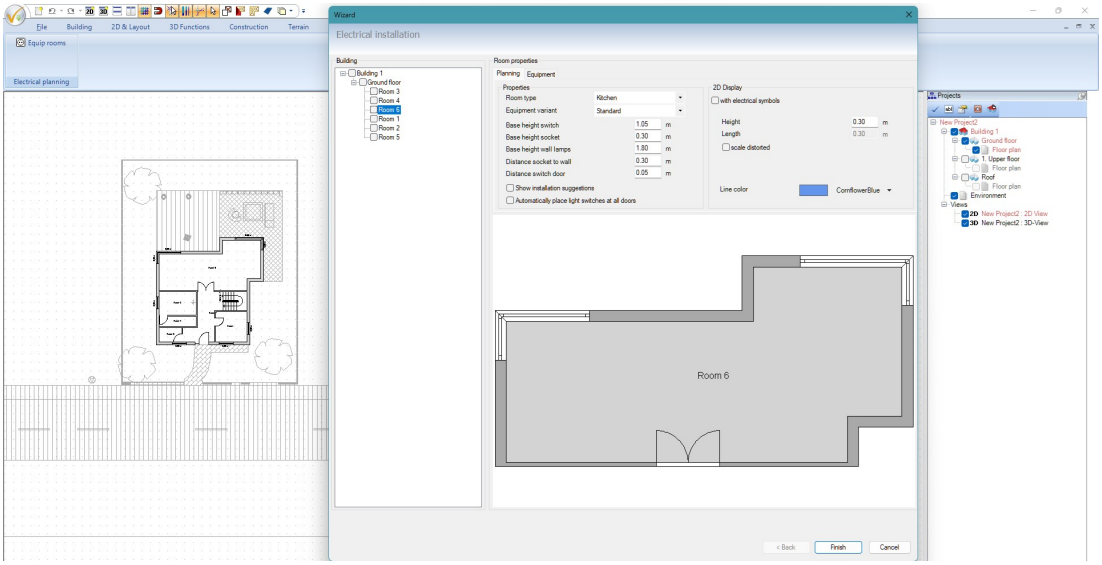
1.1.4 Requirement for starting the electrical planner – a 2D view

The electrical planner requires an existing and active 2D view to start. If this is not the case, you will receive a corresponding message when you launch the wizard.



1.1.5 The Wizard Dialog

The wizard shows the building structure and the rooms in a tree view on the left. On the right, selection and setting options for the active room that you have activated in the tree view.
Below this is a preview of the room with the walls that form the room and windows and doors in these walls.
The preview itself behaves similarly to a normal 2D view in the software, i.e. you can zoom in with your mouse wheel and move the display using the familiar key and mouse combinations. Both of these are only necessary when you want to take a closer look at certain areas in a very large room.
The walls shown in the preview are drawn by the wizard itself and shown in gray, regardless of what 2D display the walls currently have in the project itself.



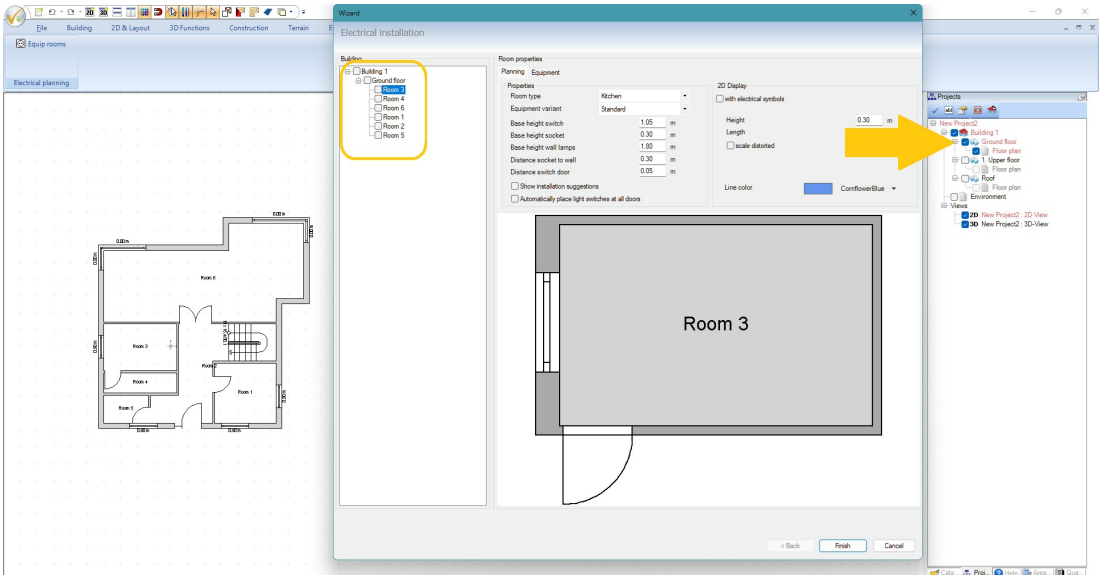
1.1.6 Display and selection of rooms and floors

The wizard lists only the currently visible buildings and floors in your active 2D view, or the rooms located on these floors, in the "Building" area on the left.

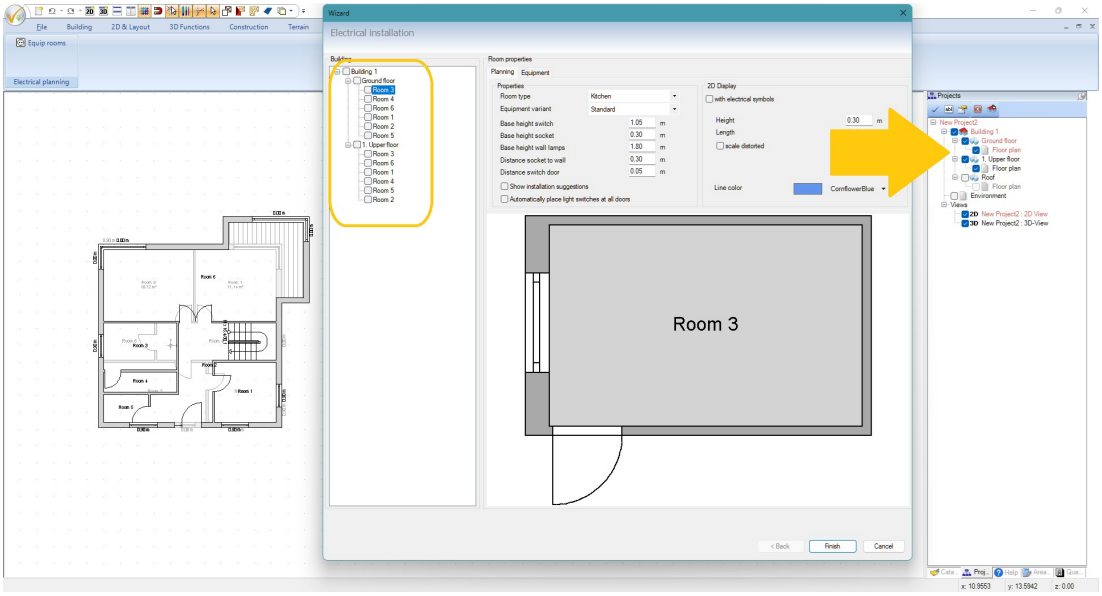
This allows you, for example in very large projects with many rooms, to use the wizard floor by floor and work your way through the project for electrical planning. You can, or should, make one floor visible at a time, run through the wizard for this floor and then complete it.

Then make the next floor visible, etc.

Here is an example of the display in our wizard and in the project viewer for a single floor:



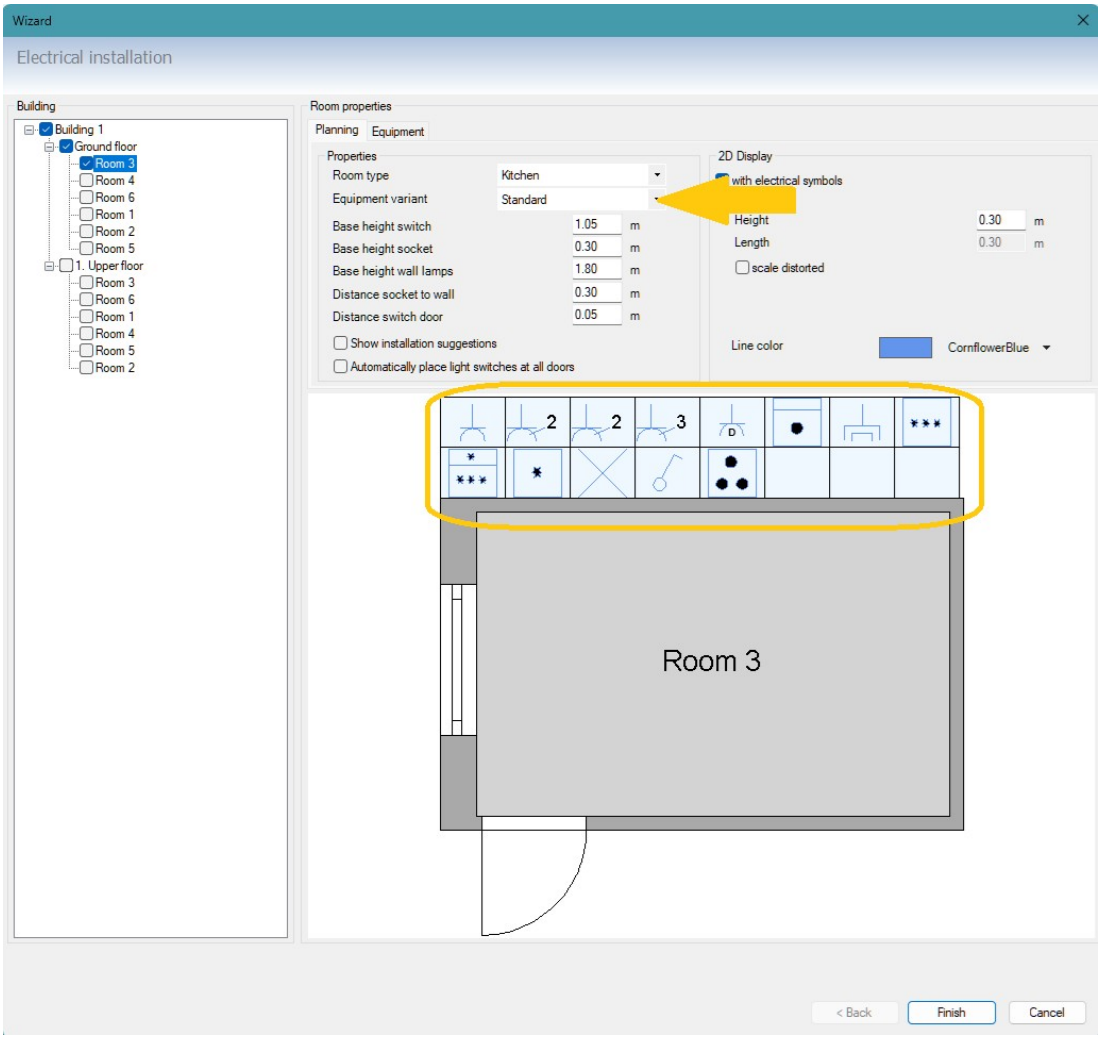
The same situation with two visible floors in our project viewer and in the electrical wizard:



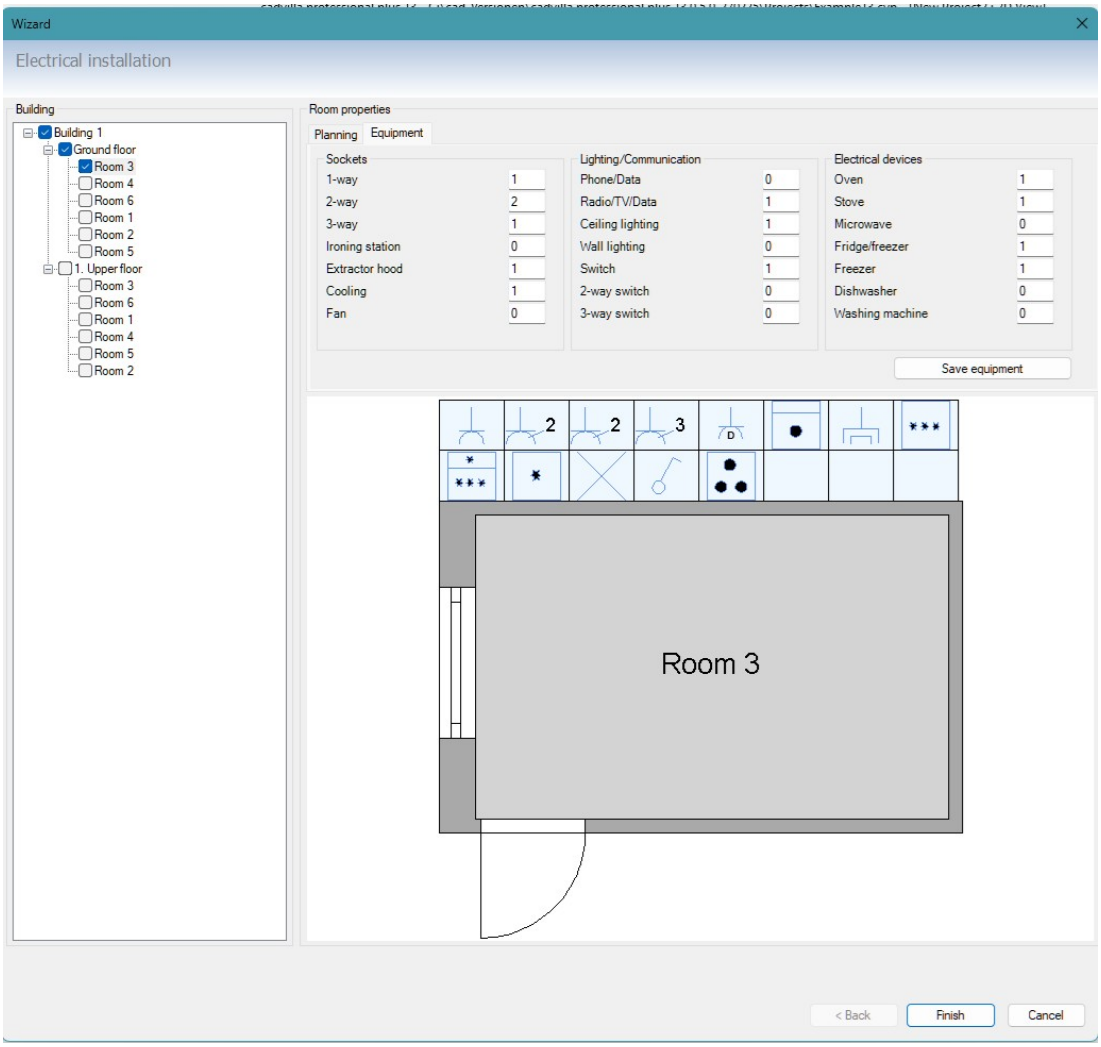
1.1.7 Selection of equipment variants

The wizard uses a set of predefined room types to equip rooms with electrical symbols and three equipment variants as standard for these rooms. The equipment variants differ essentially in the number of specified items, i.e. more sockets, more switches, etc..

You can see the assigned 2D symbols above the room in our preview.



You can see which elements are included and in what quantity on the "Equipment" tab page.



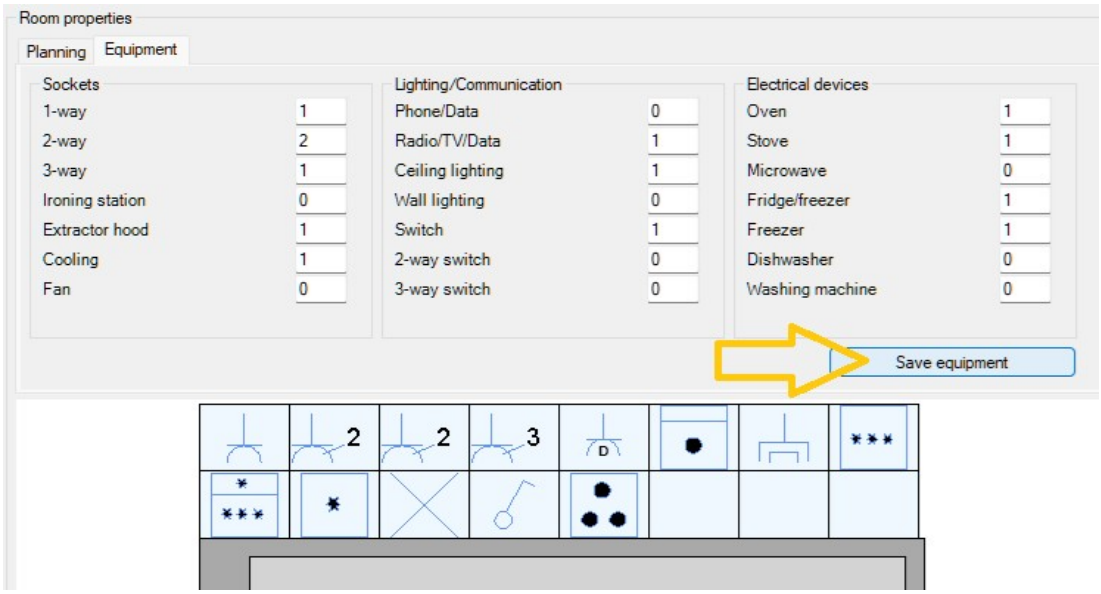
There you can check which elements are planned and in what quantity and also adjust the values manually. However, as already mentioned, it is not effective to work on the equipment numerically for each room. It is much easier to delete unwanted elements in your project or to add new ones from the catalog.

Note: changes only apply to the current room and do not overwrite the standard specifications.

If you generally want to use different equipment for certain rooms, you can add a user-defined variant.

1.1.8 Create and save your own, user-defined equipment variant

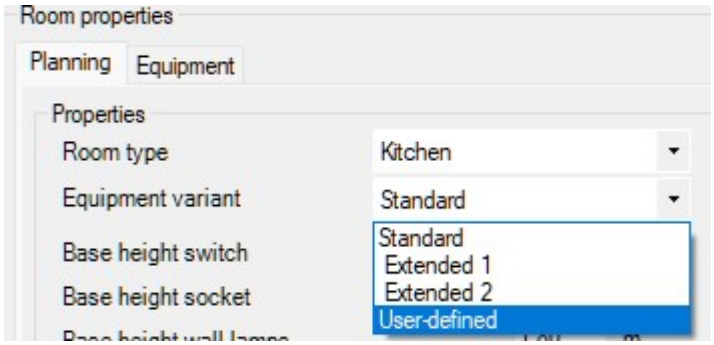
On the Equipment tab page you will find a "Save equipment" button.



When you click the button, the software creates an additional definition file for the equipment in your user directory, e.g. in:

C:\Users\Your_User_Name\Documents\Name_of_your_Software_Version\

The file name is PowerPlan.xml . If you want to keep these equipment settings in newer versions in the future, or after installing the software on another computer, you would have to copy the file yourself. Otherwise, the user-defined variants will no longer be available on a new system.
If you want to remove the user-defined variants, you can simply delete the file.
When you click the button for the first time, user-defined entries are saved for all room types. So the next time you start the wizard, a User-defined entry will appear in addition to the three standard settings.



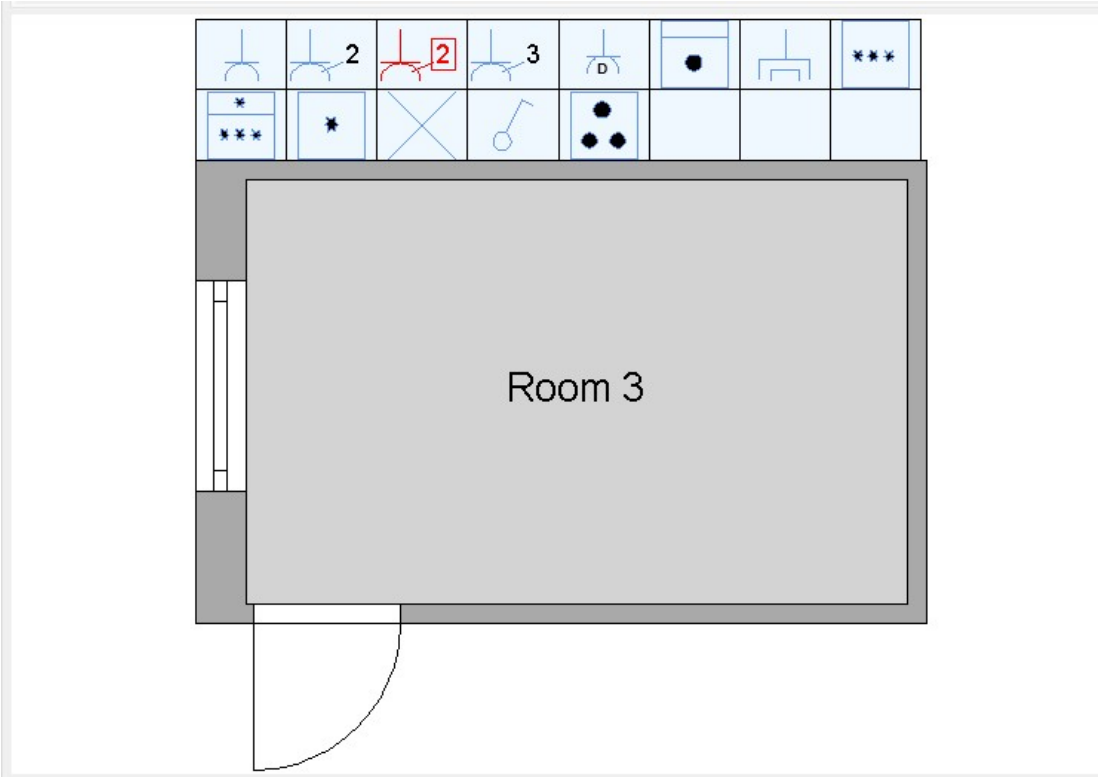
Note: the "user-defined" entries also appear for rooms to which you have not assigned individual equipment. In these cases, the default values are used. However, you can adjust this at any time if necessary by first selecting the room type, the "custom" equipment, changing the equipment and then clicking the "Save equipment" button.

1.1.9 Positioning 2D symbols in the dialog preview of the room

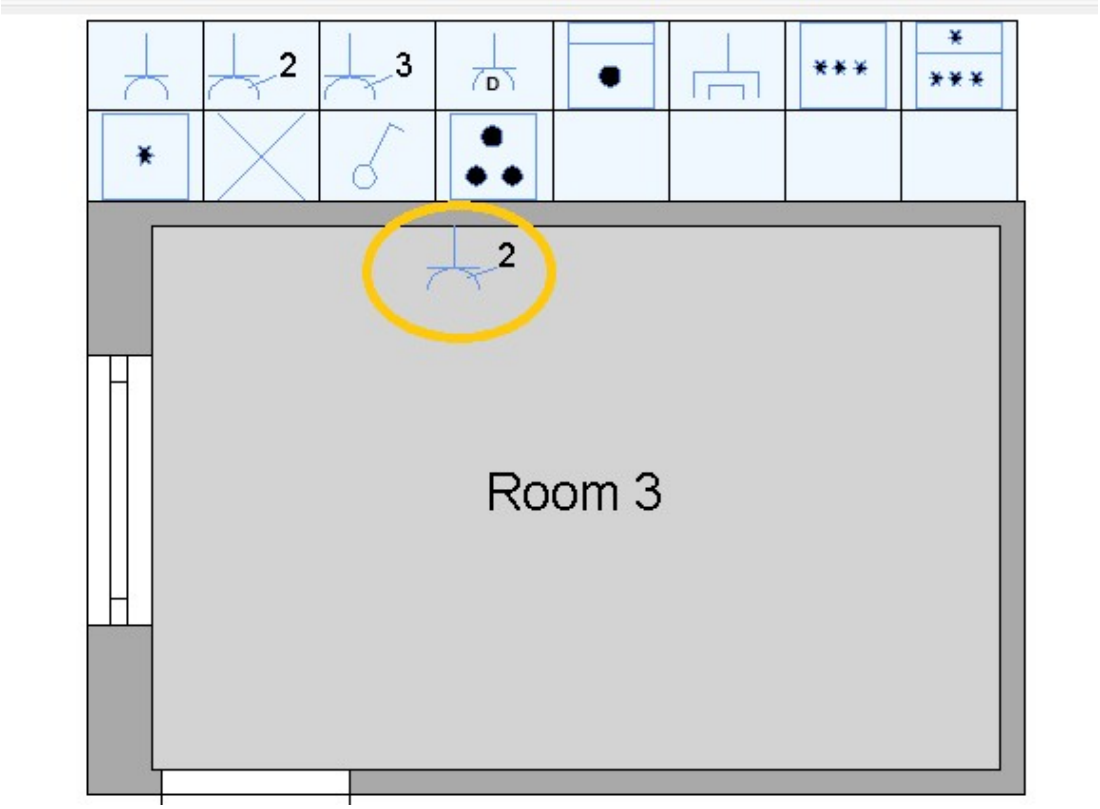
In our preview, you can specify the position before inserting the 2D symbols. All 2D symbols that are not already positioned at this point are automatically inserted into your planning project approximately in the middle of the room.

1.1.9.1 "Free positioning" in the dialog

First, select the symbol you want to position in the bar of 2D symbols above a room with a left mouse click. The 2D symbol is then marked in red. In the following screenshot, the double socket, third from the left in the top row.



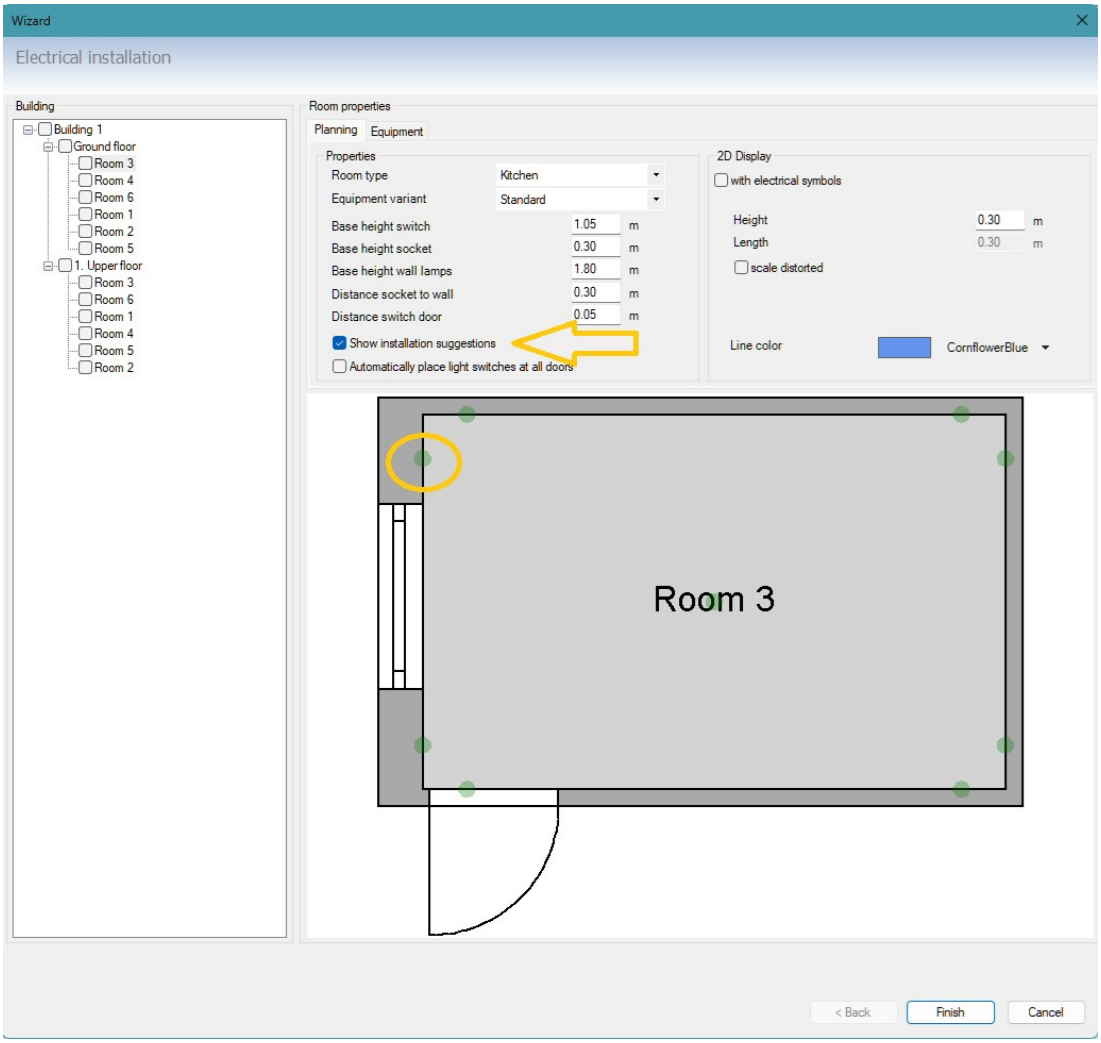
Now, in the preview, left-click on the position on a wall where the socket is to be placed.
This will insert the 2D symbol in the preview and remove it from the list.



By the way, some 2D symbols cannot be placed anywhere in the preview. For example, you cannot place a socket in the middle of a room. If necessary, you can change this later in your project, but not in the preview.

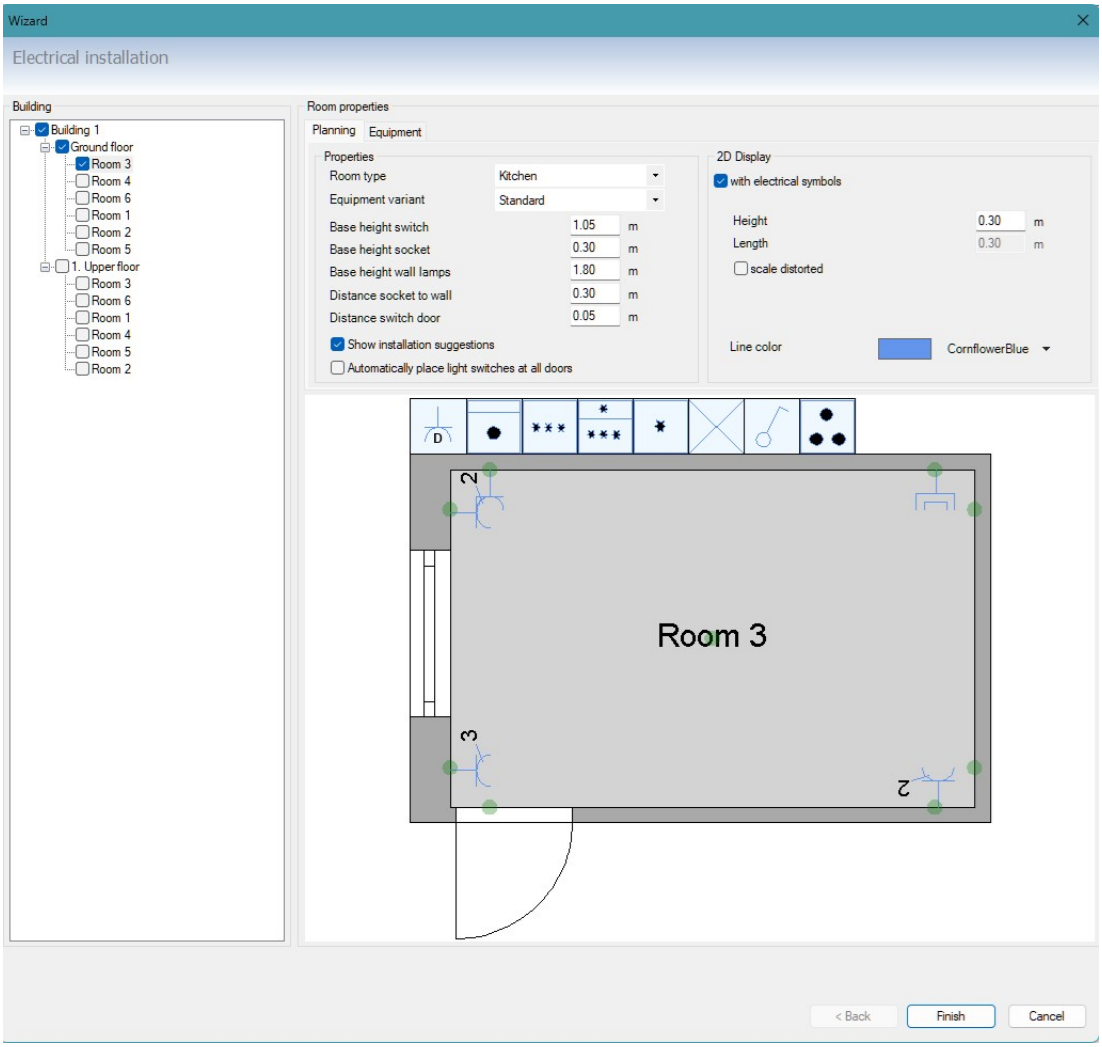
1.1.9.2 Positioning 2D symbols with installation suggestions

An alternative to free positioning is to use installation suggestions. If you activate this checkbox in the dialog, green dots will appear in the preview. The position of these dots is set internally, but can be adjusted slightly using the "Distance from socket to wall" value. The default value is 30 cm.



Positioning is now done in a similar way to free positioning, except that you don't click anywhere on a wall, but on one of the green dots.

So first select the appropriate symbol at the top of the bar with a left mouse click and then click on the green dot. It is just clicking, don't drag and drop symbols in a preview.



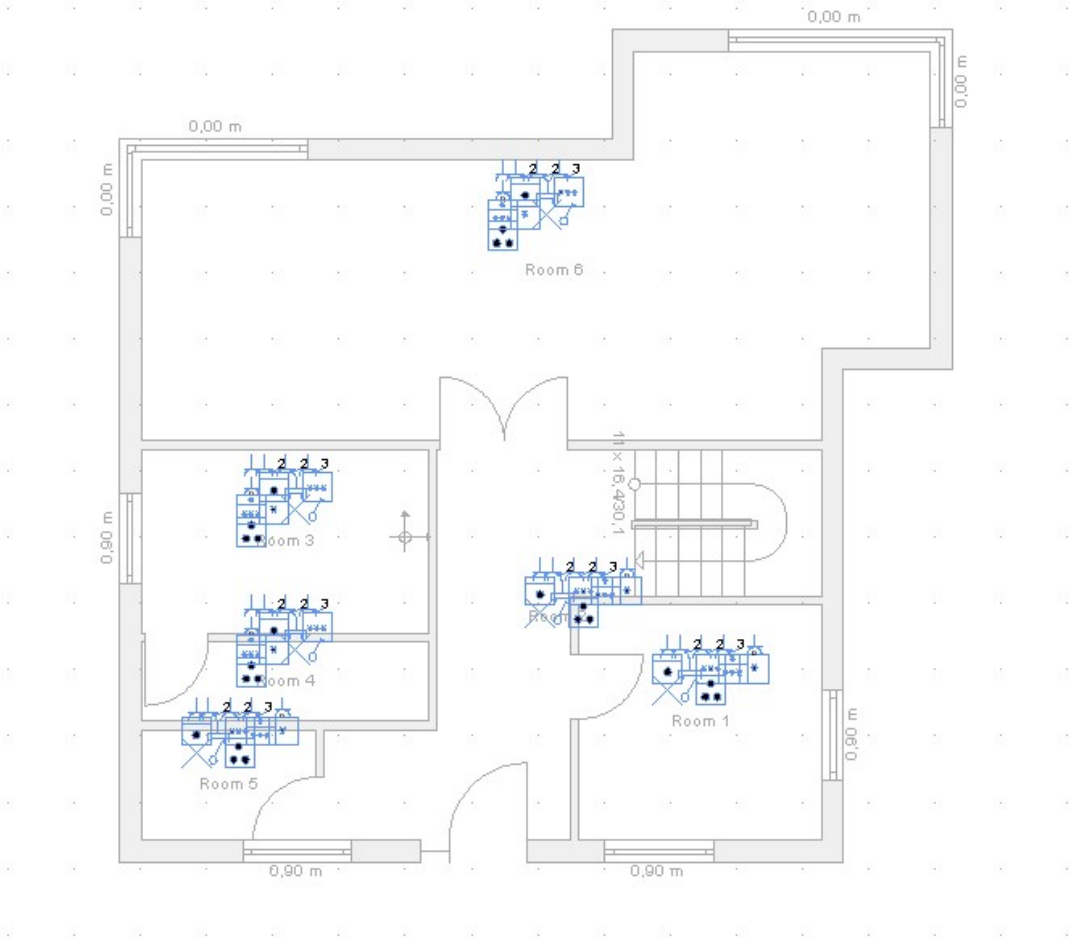
The remaining 2D symbols, i.e. those that are still visible at the top of the list, are simply placed in the middle of the room when the wizard is finished and can be subsequently moved to the correct position in the project, or deleted.

1.1.9.3 Automatic positioning of 2D symbols in selected rooms

If you do not want to use the pre-positioning of the 2D symbols in the wizard, you can exit the wizard after assigning the room type and equipment. The 2D symbols are then positioned approximately in the middle of the room, but slightly offset from the automatic room text. In case of small or small and angled rooms, they may not appear exactly within the room contour. You would then have to correct this manually, i.e. select the symbols individually and move them using the usual mechanisms.

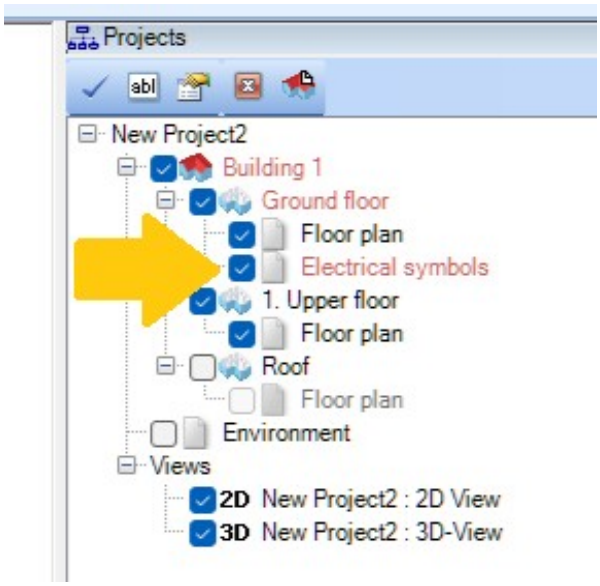
Note: electrical symbols are assigned internally to the rooms by the wizard with an identifier. However, this happens regardless of the position of the 2D symbol. So if you manually move a socket that originally belonged to the kitchen to the living room, it will remain internally assigned to the kitchen and will later appear that way in our item list.

This is what automatic positioning would look like in one of our example projects:



1.1.10 New layer for electrical symbols created by the wizard

When you finish the wizard, it automatically creates a separate layer called "Electrical Symbols" for each floor and inserts the 2D symbols from the wizard onto this layer.



You can use the layer to make all electrical symbols on a floor visible or invisible with a mouse click, or, depending on the version, other functions, such as changing the color of all symbols on a layer. But you don't have to.
Remember that the wizard may create an additional standard layer if you make subsequent changes or run-throughs.

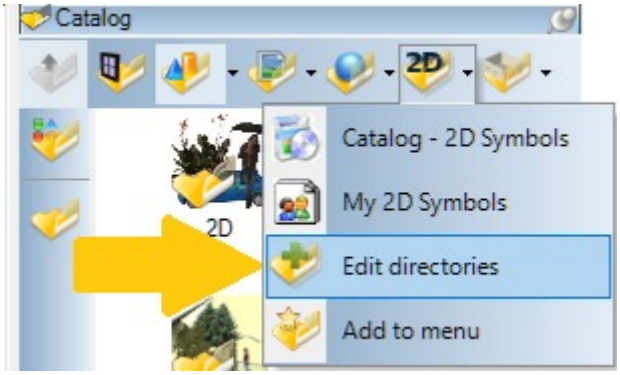
1.1.11 Using and adding your own electrical Symbols

Basically, the electrical symbols are completely normal 2D symbols from our catalogs. They are only given the additional properties of electrical symbols when they are inserted into a project, i.e. when you drag and drop them from the catalog, depending on which directory they come from.

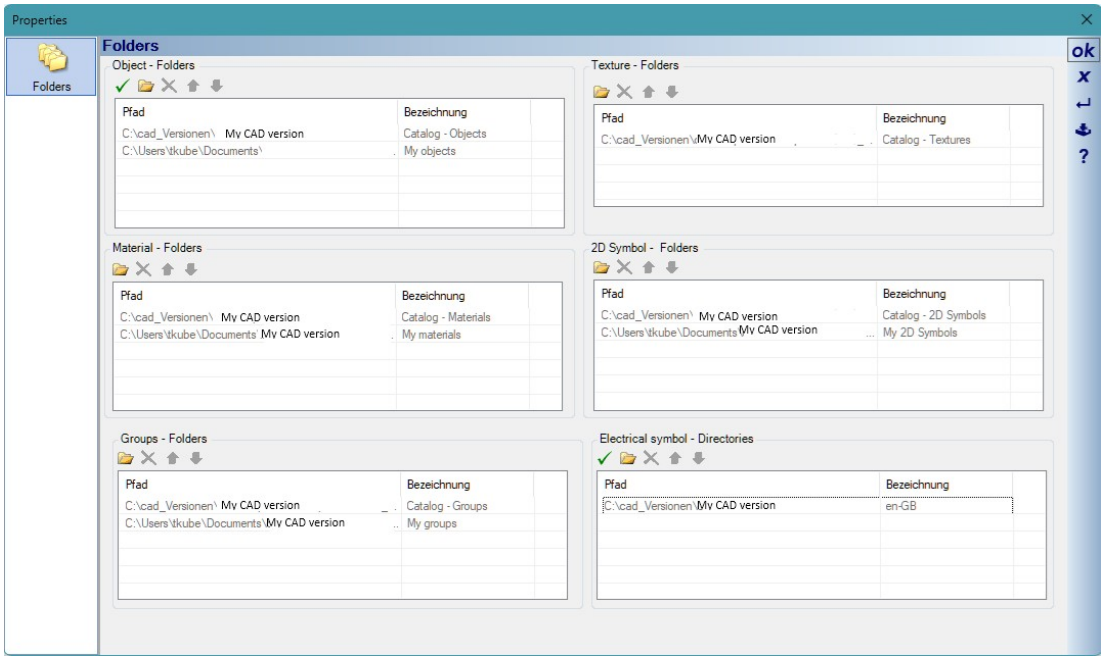
You can therefore create your own catalogs, even in other directories, and use them as electrical symbols.

1.1.11.1 Using your own folders with electrical symbols

The key feature that turns a normal 2D symbol into an electrical symbol when inserted is the path from which the symbol is loaded.
For this purpose, we have added a separate category for electrical symbols to the dialog with directory settings for our catalogs.
Open the dialog by clicking on the button for 2D graphics in the catalog, or more precisely on the small black arrow to the right of the button.
This opens a menu in which you select "Edit directories".



The following dialog opens.



In the category "Electrical symbol directories" you can add further directories using the button with the folder symbol.

Click on the button and then select the directory in which you have your own symbols.
The directory will then be added to the list:

By double-clicking in the Name field, you can give your catalog a name of your own. If not, the name of the directory will appear there.

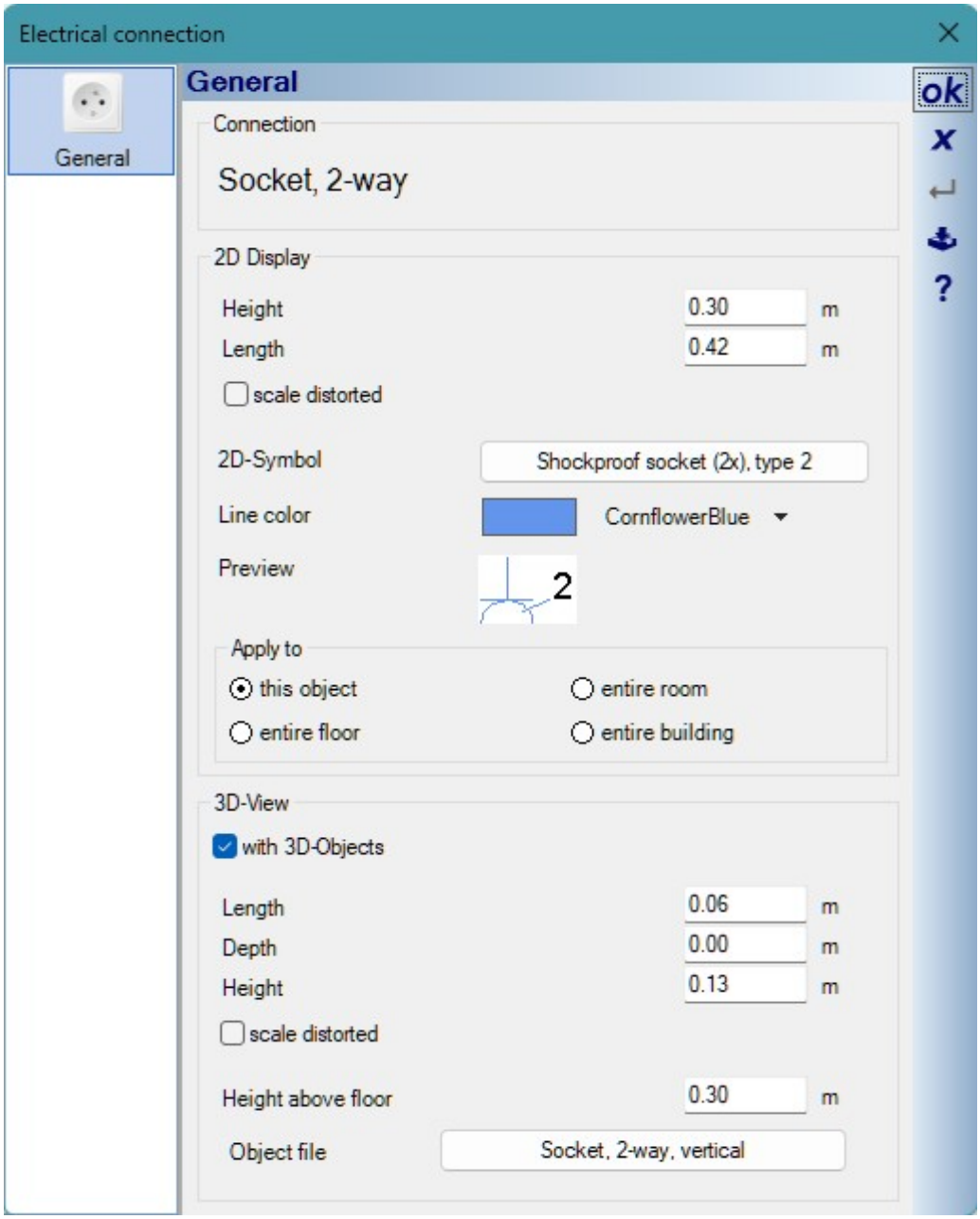
Note: this electrical category is only intended for defining your own 2D symbols as electrical symbols. If you also want to see the directory of your own catalog on the button of the 2D graphics catalog, you would have to add the same path as a directory in the "2D Symbol directories" category.

1.1.12 The properties dialog of electrical symbols

Electrical symbols have their own properties dialog. Here you will find the necessary settings for 2D representation and options for assigning a 3D object.
The standard symbols that are created using the wizard usually already have an associated 3D object.

If you want to display the 3D objects, activate the checkbox and select the appropriate 3D object from the catalog next to OBJECT FILE.

The 3D objects are stored in the catalog as usual, in the INTERIOR – ELECTRICAL INSTALLATIONS directory, and can also be manually inserted into the project from there via drag and drop. The objects from the language subdirectory of their version should be used.



1.1.12.1 The "Apply to" group box

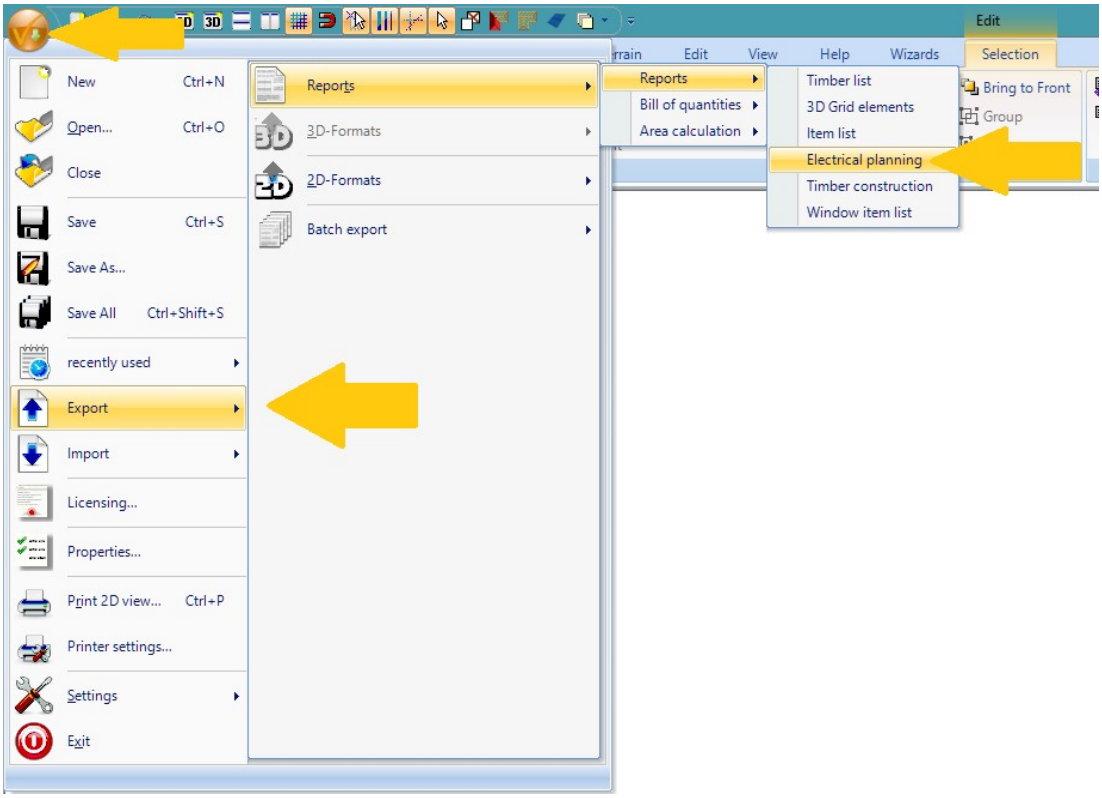
This is a variant of the "Transfer properties" function. Here you can specify whether the settings in the dialog only apply to the current object, or to the symbols in the current room, etc. However, this function should be used with caution, as, for example, depending on the dimensions of the current 2D symbol, other symbols could be scaled in an undesirable way. Or other symbols could use the 3D object set here. And so on.

1.1.13 Manually moving and snapping electrical symbols

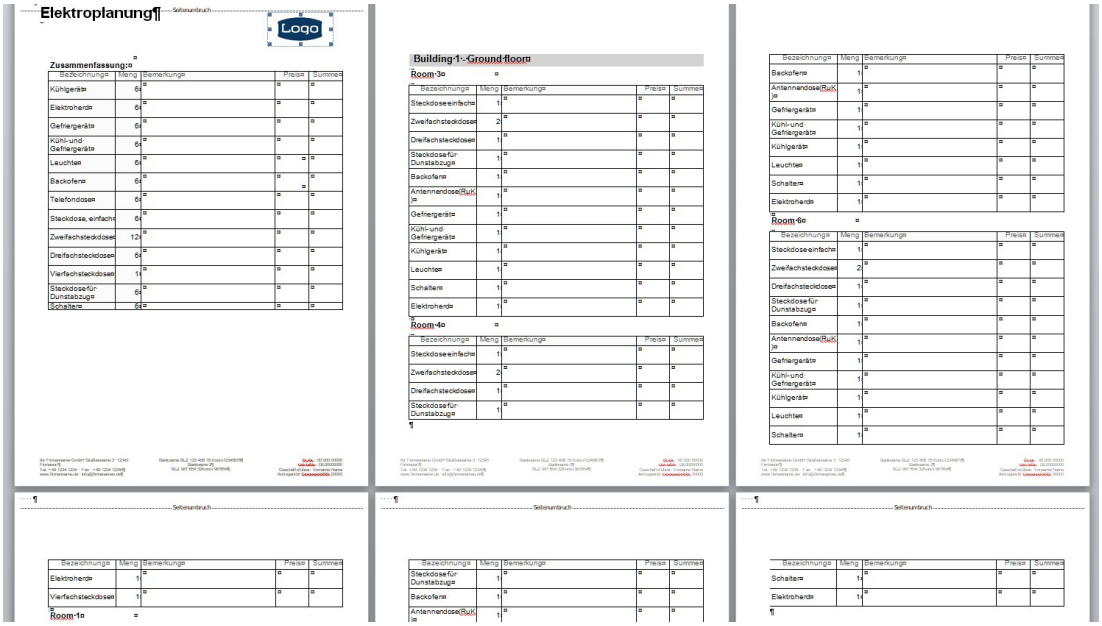
Electrical symbols use their own tool when placing and moving them, with a different snapping behaviour than "normal" 2D symbols. Electrical symbols snap to the wall edges and automatically rotate in the direction in which the wall edge runs. If you push or place the symbol on a vertical wall side, for example, the symbol automatically rotates by 90 degrees.
If you don't want this, you can select the 2D symbol and use our standard "Rotate" button on the selection toolbar to rotate it as you wish. After rotating it, however, it should not be moved again, because then the automatic system takes effect and the symbol rotates back towards the wall side.
The associated 3D objects of an electrical symbol behave differently than normal 3D objects. They can be selected, but not be edited further. Positioning is done only via the 2D symbol, and other properties via the dialog. If additional functions are required, you can deactivate the 3D object and use a "normal" one from the 3D objects catalog instead.

1.1.14 Exporting item lists of electrical symbols

As a result of your electrical planning, you receive not only the plans and drawings themselves, but also a item list with the elements used in your project.
The list is exported as usual via the menu EXPORT – REPORTS.



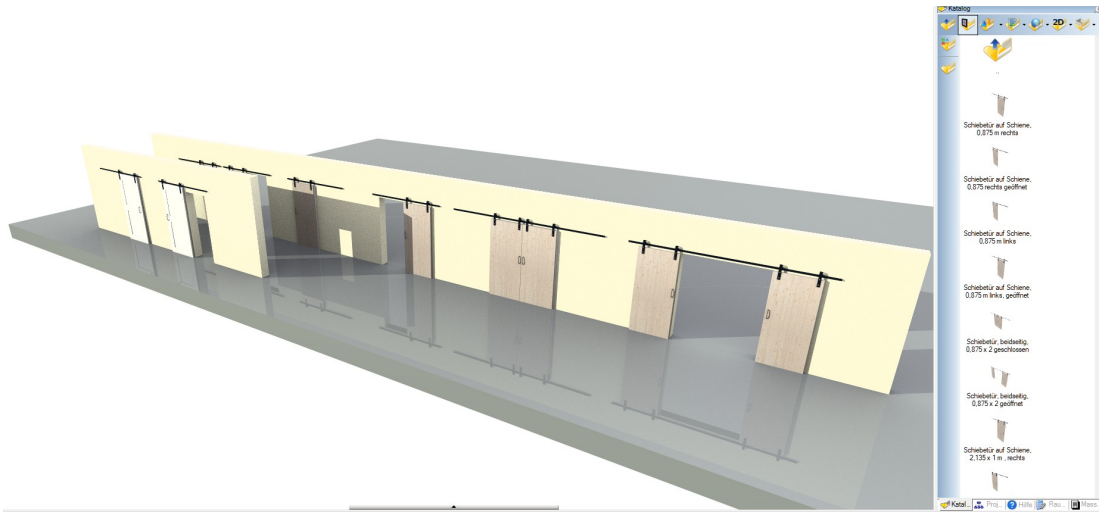
The item list export is based on a template created specifically for the electrical wizard and provides a summary of all electrical symbols as well as a breakdown by room.
The fields name, price and total are placeholders and are not filled automatically, but can be filled with content by the user, for example if the export has been made as a RTF file or Excel table.
Example image of an item list:



1.2 NEW DOORS, SLIDING DOORS, FOLDING DOORS, DOORS WITH ASYMMETRICAL WALL OPENINGS

In our software, doors always consist of a simple 3D object. Until now, the opening solid of the door object, i.e. the internal part that cuts the appropriate opening for a door into the walls, was always as large as the object itself.
But that also meant that there were no doors that contained add-on parts in the object and whose add-on parts protruded laterally beyond the actual door element. As with sliding doors with a railing system, for example.

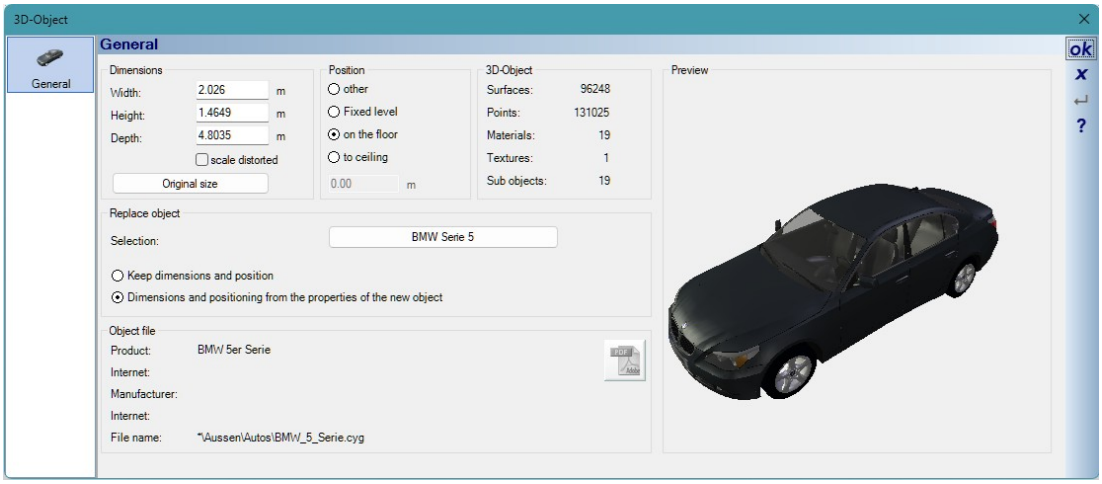
There is now a way to assign door objects an individual deduction solid for the opening, so that the size of the 3D object no longer plays a role. With these options, you can add doors to the catalog where, for example, the opening is next to the door opening, for a sliding door when it is open, or even a normal opening behind the door element, but without taking the dimensions of the railing into account.
We have added some new variants to the catalog. Here is an example image to illustrate this.



Anyone who has their own door objects and would like to prepare them with the new options can contact us directly by email and receive a description of how to do this. Since the vast majority of users get by with the existing catalog contents, we will not provide detailed documentation of the procedure here.
The extraction solid is always rectangular in these models, so it cannot take on any shape. And with these door types, you cannot use the automatic frames as an option in the properties dialog. The same applies to the size settings, since the size of the entire 3D object is always used here, i.e. including the rails etc., and not just the size of the door element object. It may be necessary to create a suitable 3D object at this point. Feel free to write to us and we will explain how this works or provide a suitable 3D object for the catalog.

1.3 EXTENDED PROPERTIES DIALOG OF 3D OBJECTS

The properties dialog of the 3D objects now shows a 3D preview directly in the dialog window and has been expanded to include functions that allow you to replace one object with another directly in the dialog.

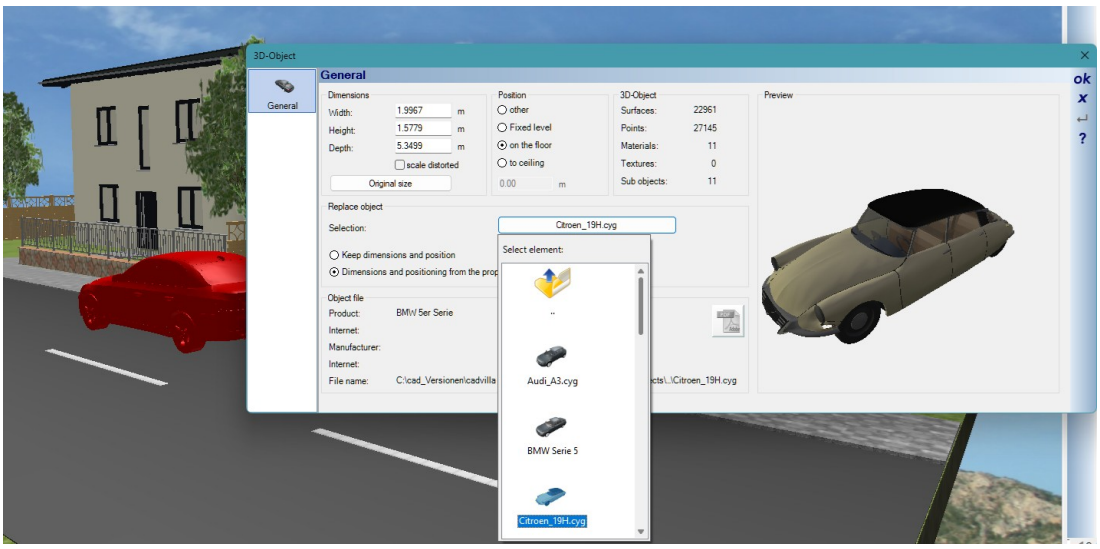


1.3.1 Replacing 3D objects via the properties dialog

If you wanted to replace an existing 3D object in your plan with another one, the previous procedure was as follows:
- optionally mark the position where the object to be replaced is located. Typically with guidelines
- delete the existing object
- search for a new object from the catalog
- activate the correct layer in your current view
- drag and drop the new object into the plan
- position the new object and scale it if necessary

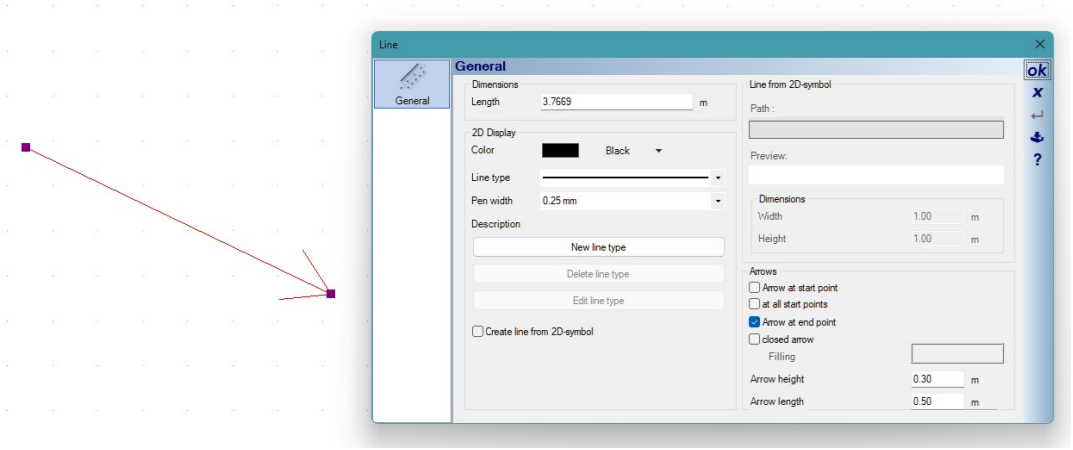
In the current dialog, in the "Replace object" area, you can now replace the current object directly in the plan. To do this, you only have to specify whether the new object should keep its original dimensions or adopt the dimensions of the existing object.
Dimensions of the existing object could be used or might be useful if you had already set trees to the correct size and now want to use a different tree.

For most "normal" objects, this would hardly make sense because they could be distorted in an absurd way.
You just need to select the new object from the catalog control and that's it.
The catalog control uses the current directory that is set in the catalog on the right. So if you use a directory with your own objects and have also stored it in the catalog as an alternative path, you would first have to activate this directory in the catalog and then you can load objects from there instead of from the software's standard catalog.

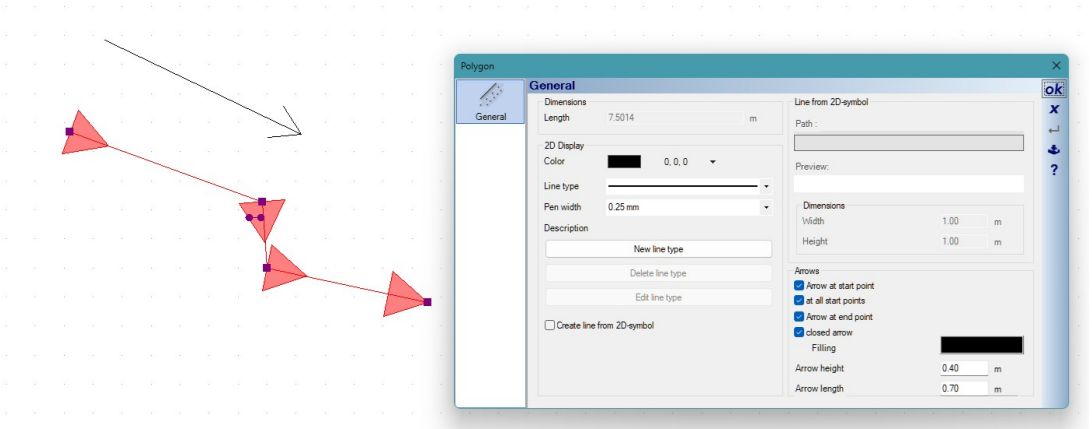


1.4 ADDITIONAL 2D DRAWING FUNCTIONS, LINES AND POLYLINES WITH ARROWS

Lines can now be shown with arrows and various setting options. The line dialog has been expanded accordingly. You can choose where along the line the arrows should appear, how big they should be and whether the arrow should only be made up simple lines or use a filled representation. The end point and start point are determined by inserting the line itself.



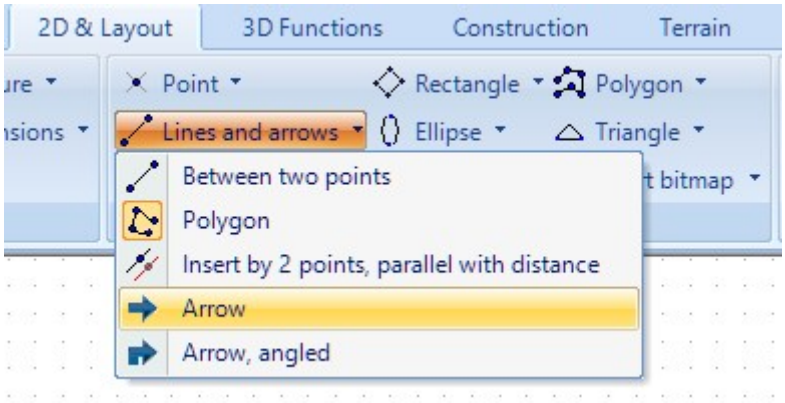
For polylines, there is an optional possibility to insert an arrow at each point along the polygon.



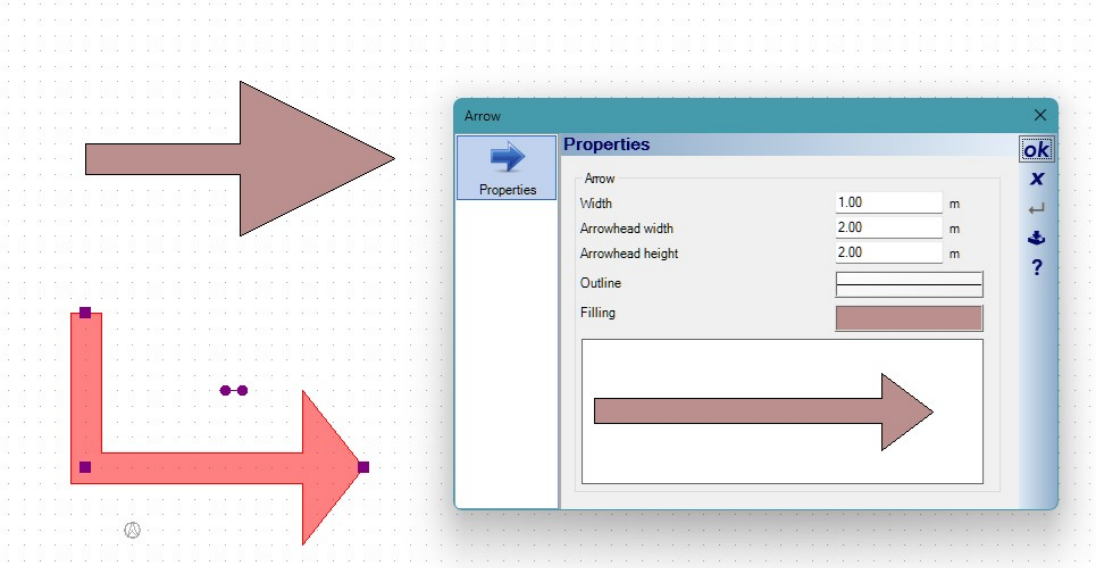
1.5 ADDITIONAL 2D DRAWING FUNCTIONS: ARROWS AS A SEPARATE 2D ELEMENT

In addition to the option of using lines with arrows, there are now arrows as a separate drawing element, but currently only in 2D top views.

You can find the input functions on the Lines and Arrows button on the 2D & Layout ribbon

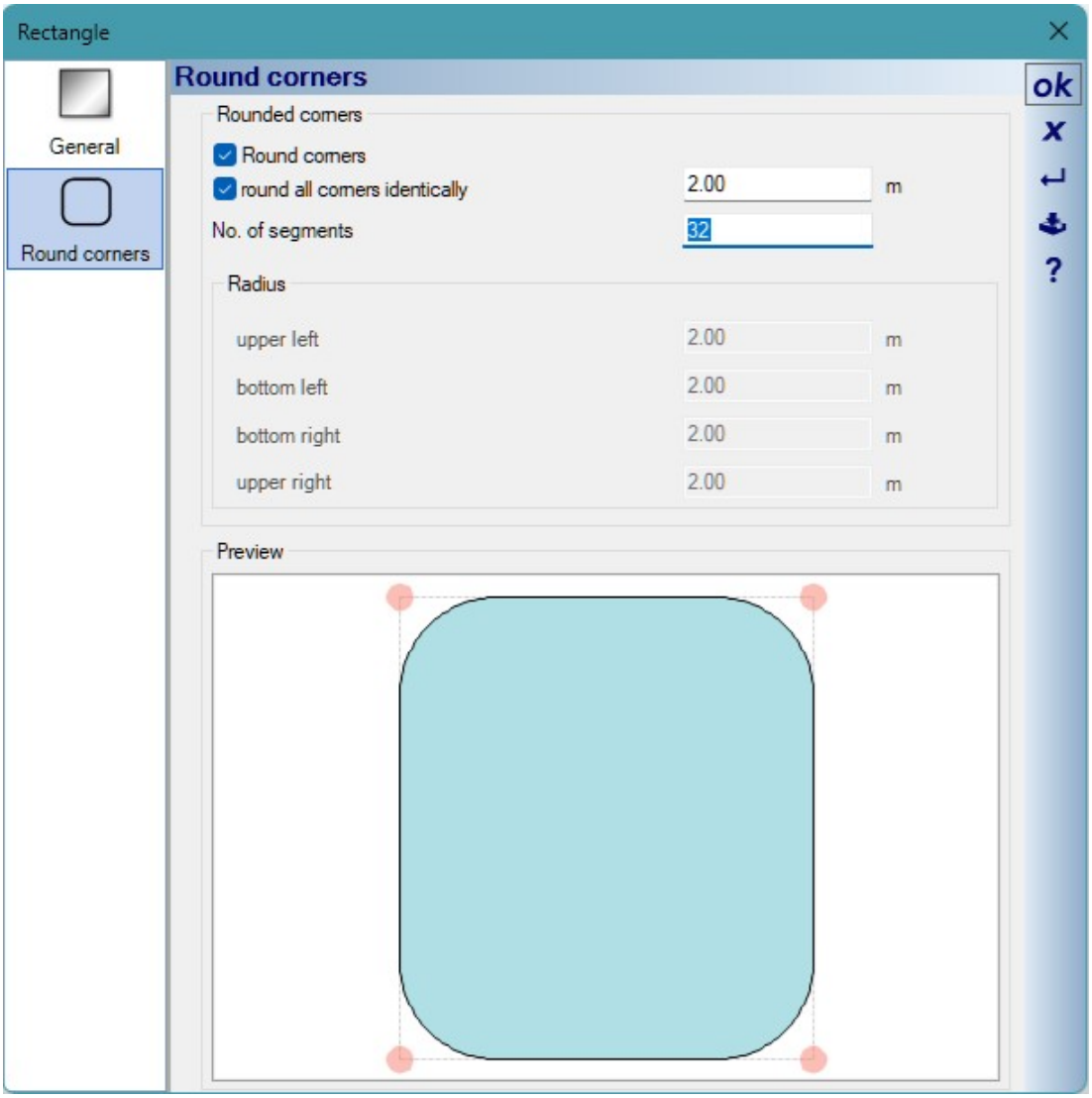


Arrows have their own properties dialog and are also registered as a separate element in the visibility settings of our views, so you can show or hide them using this function.

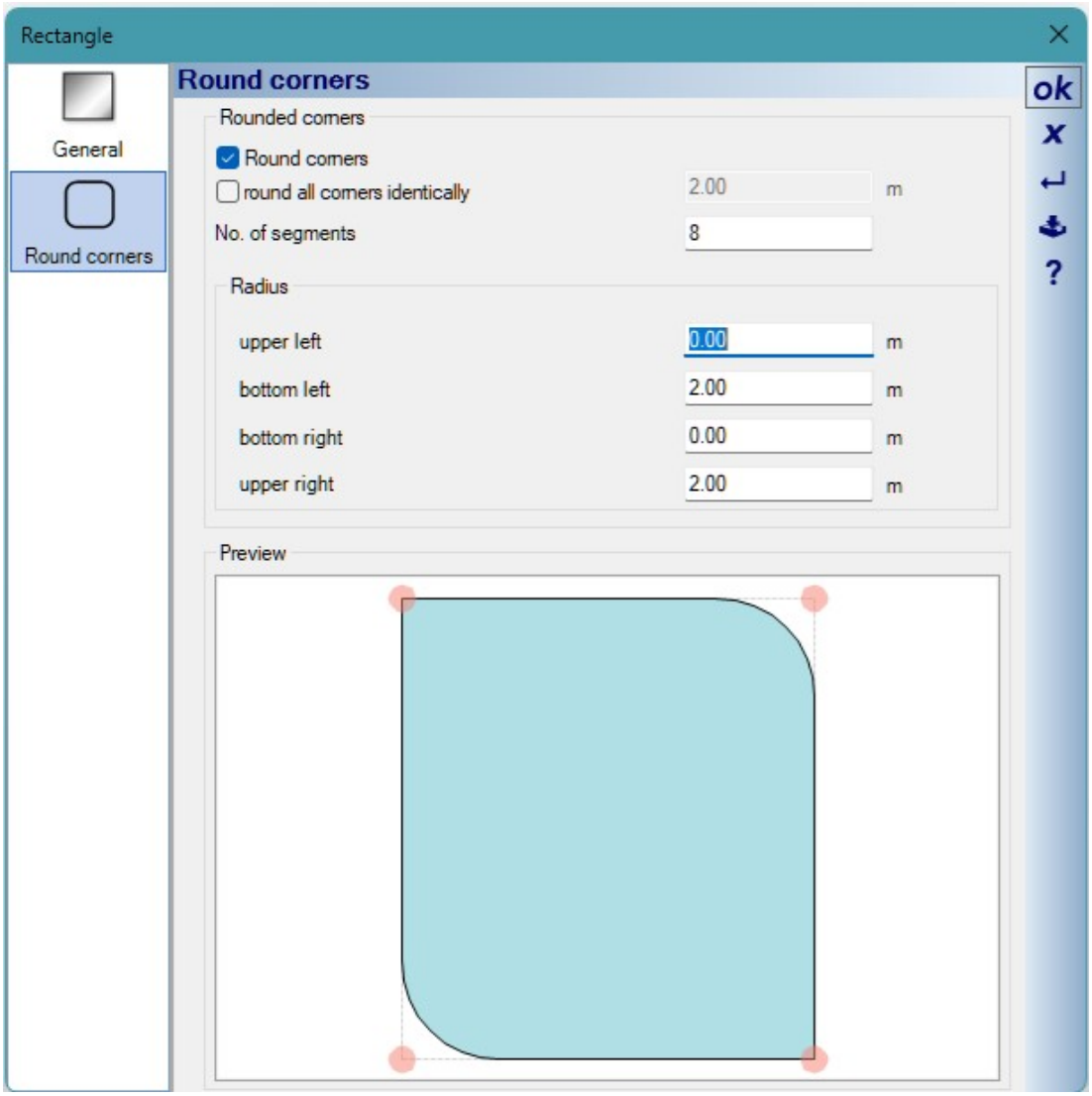


1.6 ADDITIONAL 2D DRAWING FUNCTIONS, RECTANGLES WITH ROUNDED CORNERS

In the properties dialog of rectangles you will also find a page for rounding the corners.

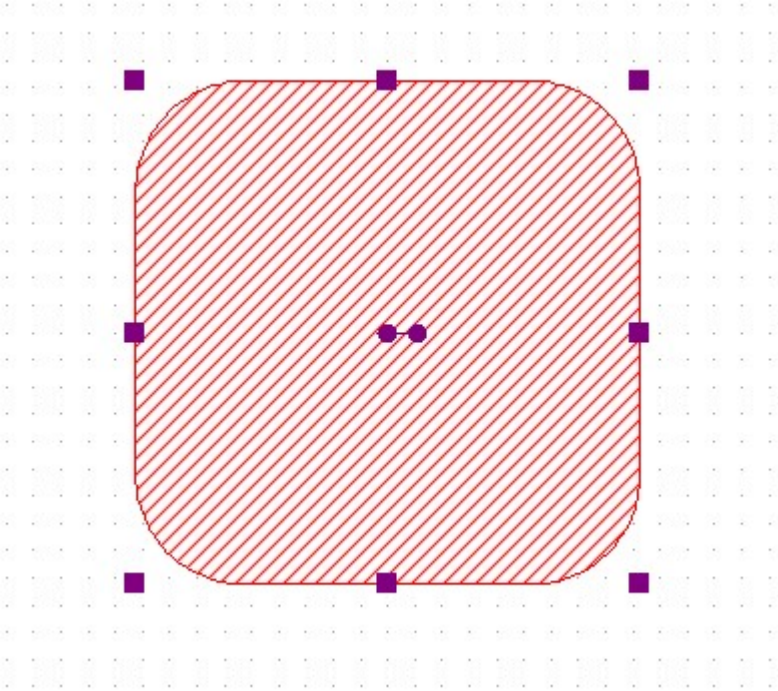


Here you can either round all corners identically, or select individual ones. The number of segments determines how finely the corners are formed. This is less relevant for 2D drawing elements, but if you want to use these shapes for modeling with our 3D constructions, you should limit the number of segments to the necessary minimum, because otherwise the resulting 3D solids will form a lot of potentially useless surfaces.

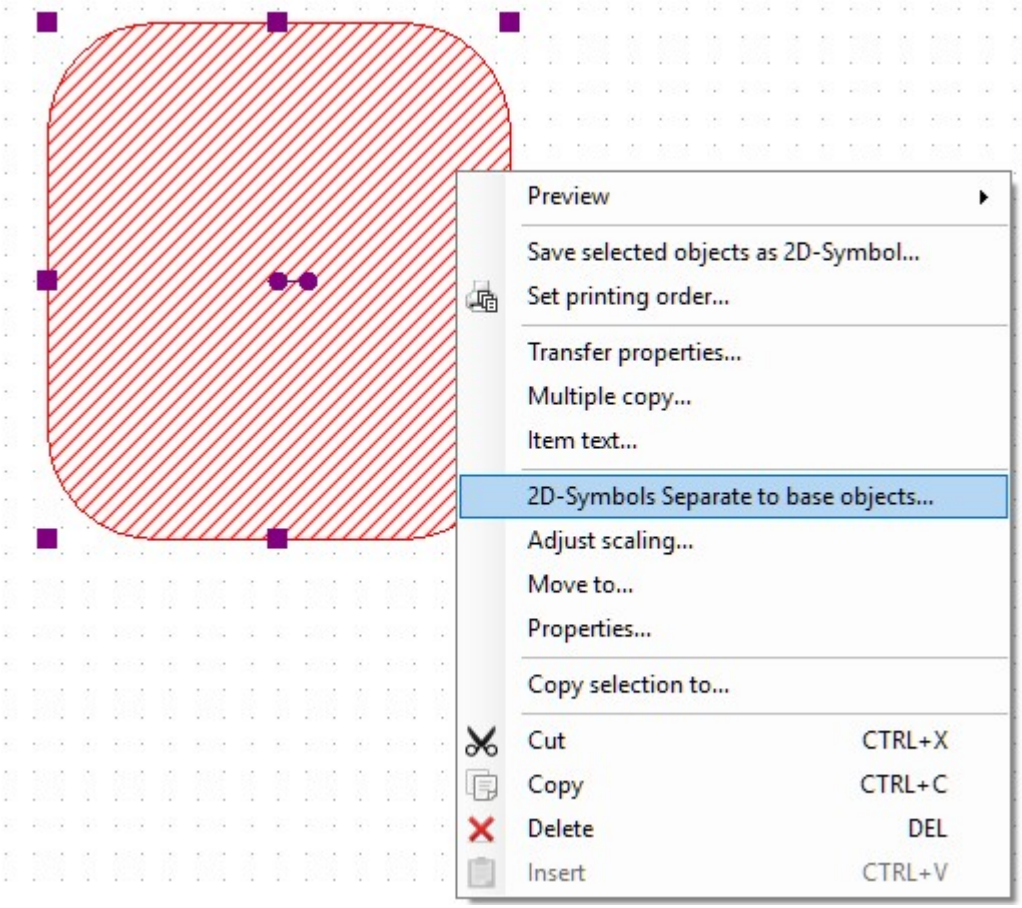


1.6.1 Using rounded rectangles for modeling 3D solids

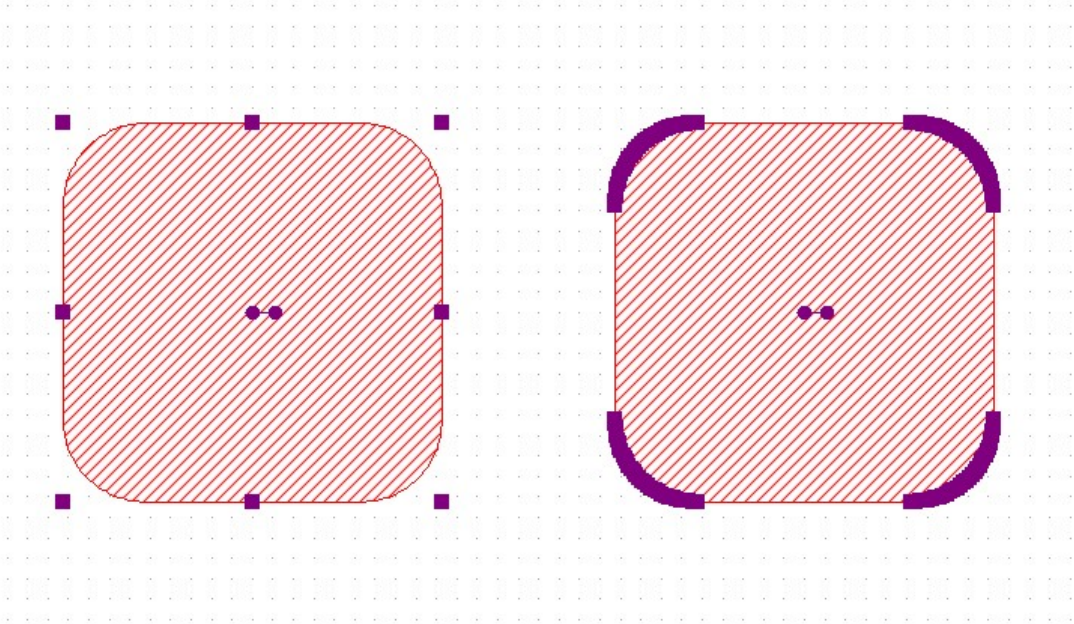
If you want to use this 2D template for modeling with our 3D constructions, e.g. with extrusion or sweep solids, you would have to add another step.
In the drawing itself, the element is still a "normal" rectangle and is surrounded by the normal bounding box. You can see this when you select the rectangle.



This is exactly the contour that the extrude solids would follow if you try to extrude the rectangle. Since this is not what you want, you would first have to select the rectangle, save it as a 2D symbol in the catalog using the context menu, drag it back into the plan and separate it into its individual objects using the context menu.



Only now does the former rectangle show the actual contour as a filled 2D polygon and can be extruded in exactly the same way.
On the left is the rectangle with the bounding box and on the right is the filled polygon that was created from the rectangle and the 2D symbol.



1.7 REPLACING DOORS DIRECTLY WITH WINDOWS, AND VICE VERSA

It is more common that doors that have already been planned should be replaced with window constructions because of the better representation. This particularly applies to doors on balconies and terraces, where doors and windows are often combined.

Since the window constructions can be fully parameterized in terms of frames and sashes, but doors only consist of a finished 3D object, the two usually do not fit together in the 3D representation.

In such cases, it is better to use a window construction instead of a door and mark the stop and opening direction in the floor plans with a simple 2D symbol from the catalog, BUILDING COMPONENTS directory. This means that the window is shown as a door in the floor plan, but fits perfectly with the adjacent windows in 3D.

If you are not aware of this from the start, you would have to subsequently replace the installed door with a window. To do this, you would have to mark the position, delete the door, navigate through the catalog, select a window construction, insert it using drag and drop and adjust it accordingly.
To simplify the whole thing, you can instead select the door in the project and replace it directly with a window construction using the context menu.

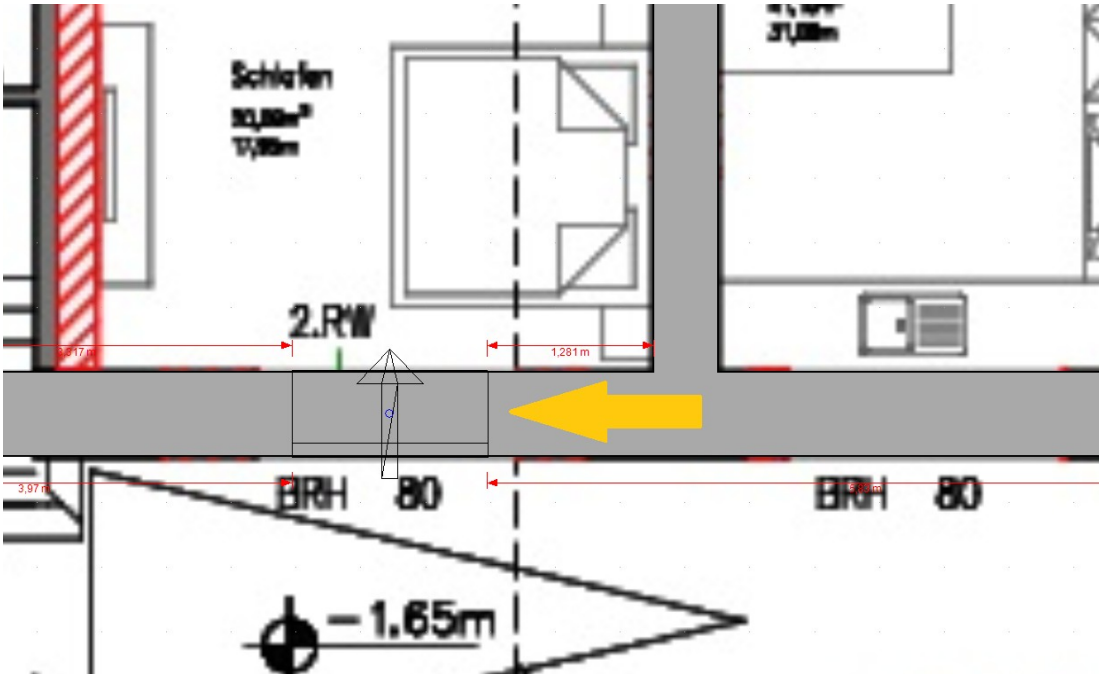
This also works the other way around, i.e. replacing a window with a door.

1.8 TRACING FLOOR PLANS OVER AN IMAGE, CHANGES

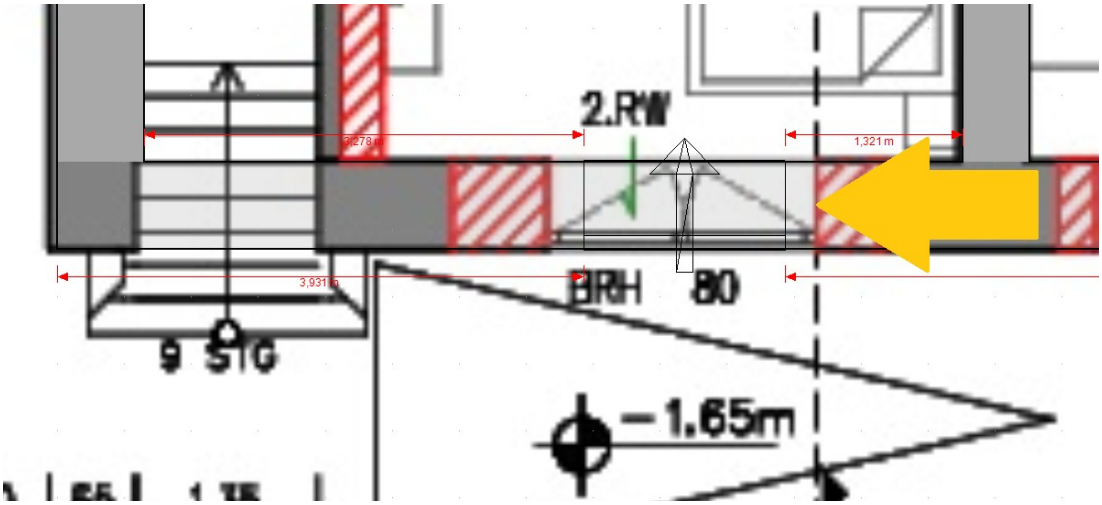
We have changed the behavior of fill properties for walls or images in this popular way of inserting floor plans.

1.8.1 Transparent display of walls when moving or inserting windows and doors

Until now, walls retained their filling properties when you inserted or moved a window or door. The disadvantage was that the wall then continued to cover the floor plan behind it on a scanned plan and you couldn't really see the windows drawn in it.
This is how it was displayed until now. The yellow arrow marks the preview of the window.



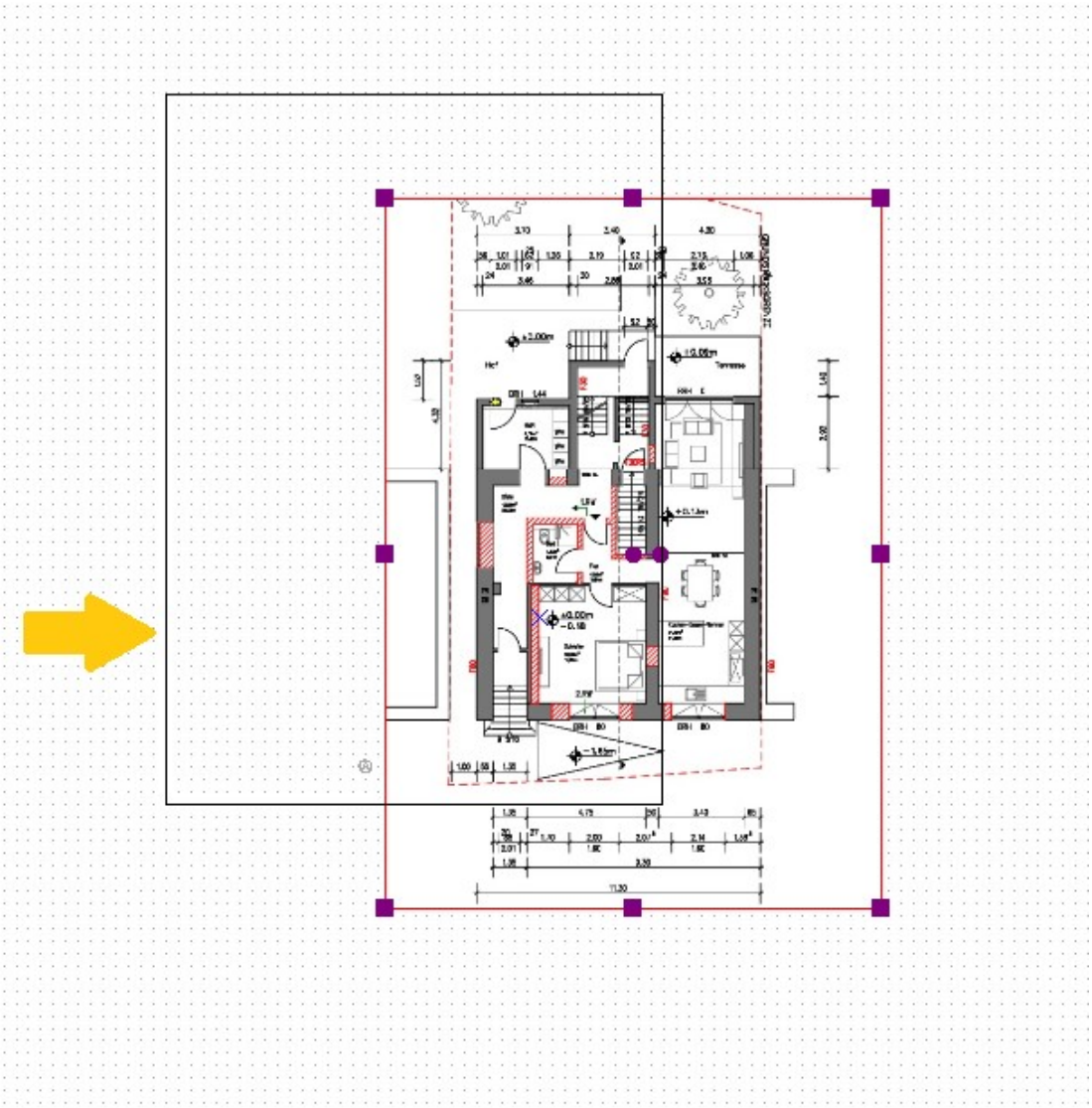
Now the fill properties of the wall are removed during these operations, so the wall becomes completely transparent and allows you to see the image underneath.



1.8.2 Images of floor plans become invisible while moving them

Something similar happens when placing a floor plan image, perhaps if you insert it later and at a time when the first walls have already been constructed. You would then have to place a specific point on the image exactly on a point in your plan. But that is a bit problematic if the image covers the plan.

The following image shows the previous behavior. The red frame is the selected image and the yellow arrow shows the preview when moving. There are already walls behind the image, but they remain covered and are not visible.



Now the image is removed as a fill property when moving, so that you can see the walls underneath. The way to place it would be to first select the image, start the Move with Reference Point tool, click on the corner of a wall in the image as a reference point. And then move it. Since the image no longer covers the walls, you can set the corner point of the wall from the image, which is now attached to the mouse, exactly on the corner of the existing walls. A further left mouse click ends the process and sets the image in the desired position.
The red arrow marks the frame of the image, which is now without filling, and the yellow arrow marks the reference point that you had previously picked and which you can now set on the corner of the wall.