



CAD PROJEKT K&A

Operation manual

Technical documentation

CAD Kitchens 8.0, CAD Decor 4.0, CAD Decor PRO 4.0

INTRODUCTION

This manual describes how to create and use the technical documentation included in the software.

We wish you pleasant and fruitful work with our software!

The CAD Project K&A Team

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The manual provides instructions and keyboard shortcuts for the previous 32-bit version of the program environment. The program now runs in a 64-bit environment. The commands and keyboard shortcuts may have changed as a result. Additionally, the program's interface has been updated.

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Technical documentation of the project

1. Introductory remarks



CAD Decor PRO allows automatic generation of professional technical documentation for projects. It works reliably even for projects with a very large number of surfaces. The module offers a lot of flexibility in how projects are displayed.

The content and appearance of the documentation depends only on the creative ingenuity of the users. Thus, the documentation can contain any number and types of pages (including sample visualizations, technical drawings, layouts of selected walls or parts of the project, projections of worktops and floors, cross-sections of the room with or without equipment). The selection of some of these elements is made during the initial configuration of the documentation or during further work with it, while the layouts and cross sections can be created after the documentation is generated. All pages can be edited and freely customized to suit your current needs.

An interesting feature of our documentation is the ability to display the textures of objects (e.g. fixtures, cabinets and worktops, tiles and paint). Of course, objects can also be presented in linear form. The module also offers the possibility of introducing new objects directly in the documentation (any shapes, shading, dimensions, texts and references, graphics and any tables), as well as simple management of the scale and size of the sheet, for each page separately.

2. Documentation module launch and configuration

The "**Documentation**" module in the program can be started in two ways:

- in the .4CAD environment, using the "**Documentation**" icon  on the "**Interior 1**" bar,
- in the visualization, using the "**Documentation**" icon  in the top menu.
- when you select any of the above icons, a "**New Document**" window will open with four tabs: "**Data**," "**Auto-generation**," "**Tables**," and "**Advanced**" (Illustration 1).

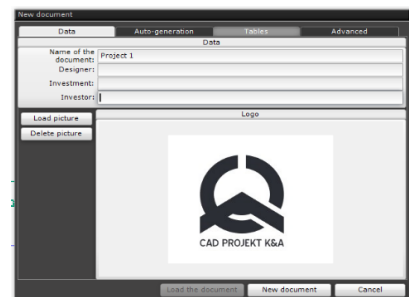


Illustration 1 Documentation configuration window

3. Project data tab

Here (Illustration 1) you can fill in the information that will be displayed in the table, attached to the documentation (project name, designer, investment and investor data). You can also load a company logo here - just click the "**Load picture**" button and point to a JPG, PNG or BMP file in your computer location, then select the "**Open**" option. The logo inserted here will be displayed in tables, inserted into the documentation.

4. Auto-generation tab

In this tab (Illustration 2 and 3), you can specify the content of the documentation to be generated (that is, the types of pages included in it). You can choose from options arranged in four panels, described in the table on the next page. The first time you run the **Documentation** module, the middle panel "**Selected Pages**" will be blank (Illustration 2), while subsequent runs will remember the last selected template of pages to be created (Illustration 3).

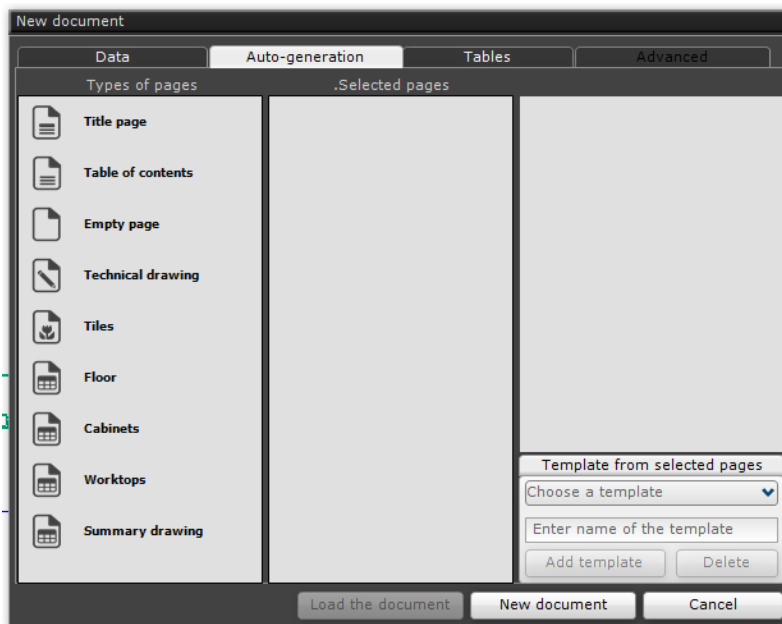


Illustration 2 The first launch of the window "New document" - a blank panel "Selected pages"

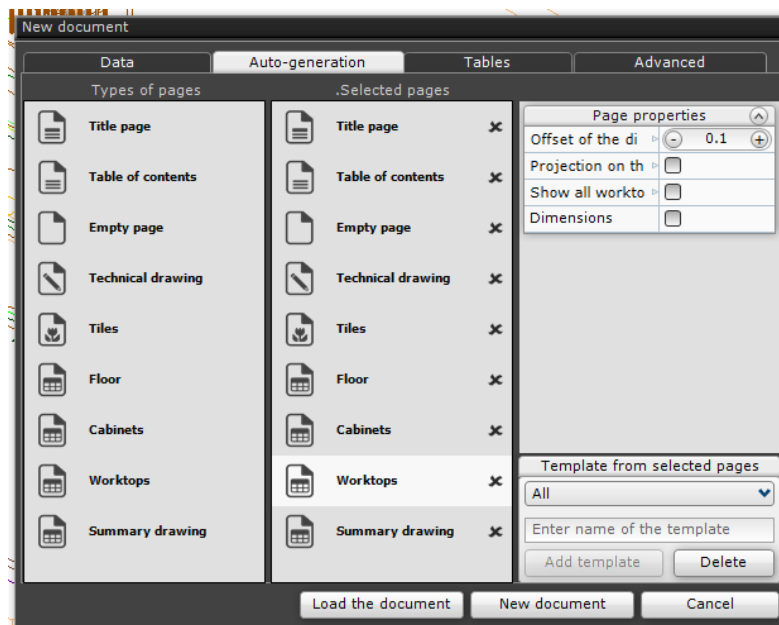


Illustration 3 "Autogeneration" tab - view after selecting a template and marking the "Worktops" page

The following options are available:	
„Types of pages“	Here you will find a list of all available page types that you can use when creating a new document. They are described under "Types of pages and their properties" .
„Selected pages“	The page types selected by the user for the current documentation are displayed here. When the program is first launched, this field is empty - the user can decide what to include. To make it easier, we have prepared several default templates that can be selected from the list in the lower right corner of the window (Illustration 4). Once you select a template, it will already be open the next time you launch the module. You can also indicate the page types yourself by dragging them with the mouse (using the drag-and-drop method) from the "Types of pages" panel, and delete the unnecessary ones with a cross ✕. You can also delete existing templates and add your own. An example of a custom template is shown in the illustration below the table.
„Page properties“	<p>The right panel shows options to choose from for four types of pages:</p> <ul style="list-style-type: none"> • „Technical drawing“: you can add autogeneration of wall layouts, replace windows and doors with symbols or decide whether to display their texture), • „Worktops“: it is possible to set the offset of the dimension line, decide whether each worktop is to be presented additionally on a separate page (option "Projection on the worktops "), and the visibility of worktops in a situation where in the top projection some of them are obscured by others (selecting the option "Show all worktops" causes the worktops located at a higher height to become transparent and expose the worktops located lower) (Illustration 5), • Tiles/Cabinets - you can add autogeneration of wall layouts. <div style="border: 1px solid black; padding: 5px; text-align: center; margin-top: 10px;"> <p><i>Note that for other types of pages this panel is empty.</i></p> </div>
„Template from selected pages“	<p>A list of ready-made templates to use when creating documentation. You can add your own - just left-click in the "Enter template name" field, enter the text, set the contents of the "Selected pages" panel (using drag-and-drop) and click the "Add template" button. If any template is unnecessary, you can delete it using the "Delete" option.</p> <div style="border: 1px solid black; padding: 5px; text-align: center; margin-top: 10px;"> <p><i>Note: Memorizing a new template requires opening a new or loading a previously created document. If you select the "Add template" button and close the window by clicking on the "Cancel" button, the template will not be remembered.</i></p> </div>

5. „Tabs“ tab

In this tab you can select the default tables to be displayed in the documentation. You can choose patterns for horizontal and vertical page positions (Illustration 4). In the situation shown below, on all horizontal pages of the generated documentation, Table 1 from the left panel will appear, and on all vertical pages – Table 5 from the middle panel (if the user changes the page orientation, the table will automatically change).

When you left-click on a table name, a preview of it appears in the right part of the window. When you move the cursor over this preview, a magnification of it will appear in the left part of the window, which makes it easier to decide which table will be most suitable in terms of content and location (Illustration 5).

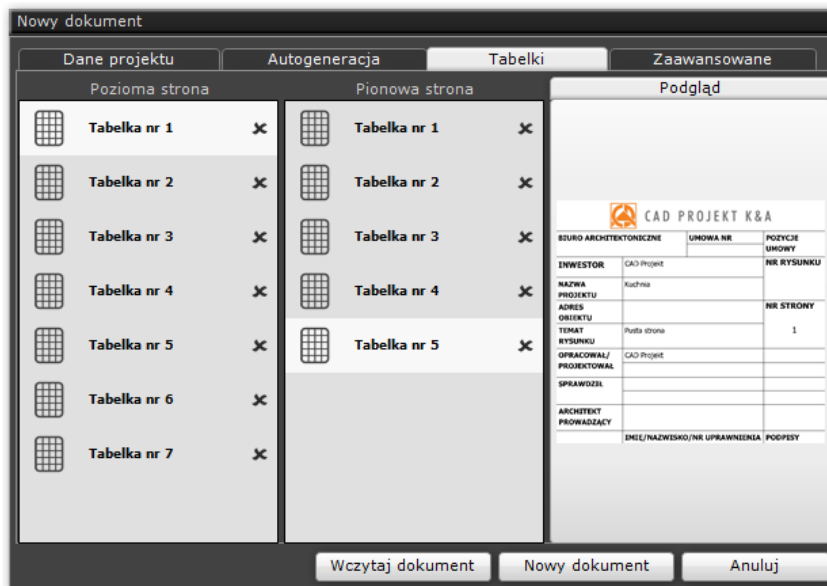


Illustration 4 "Tables" tab

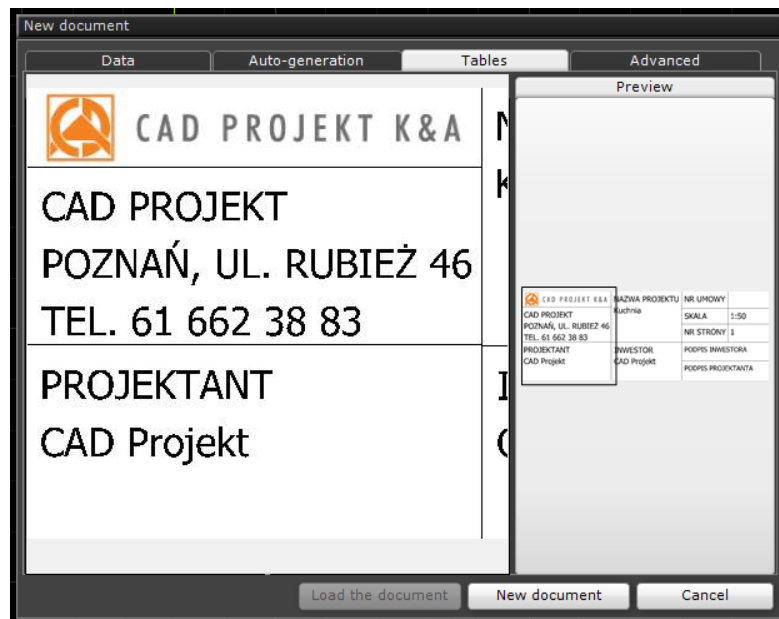


Illustration 5 Enlarged preview of the selected table

6. Advanced settings for the documentation module

In this tab you can define the settings: general, page, auxiliary and dimensional lines, section planes and projections of individual tops (Illustration 6). Once you save a new document, these settings will be displayed in every subsequent document until you change them. To create a new documentation, use the **"New document"** button - the program will load the pages you have selected with the properties you have assigned. If the documentation has already been saved in the project, you can use the **"Load the document"** function, and the documentation will be displayed (you can edit it).

It is possible to restore the default settings for the documentation.

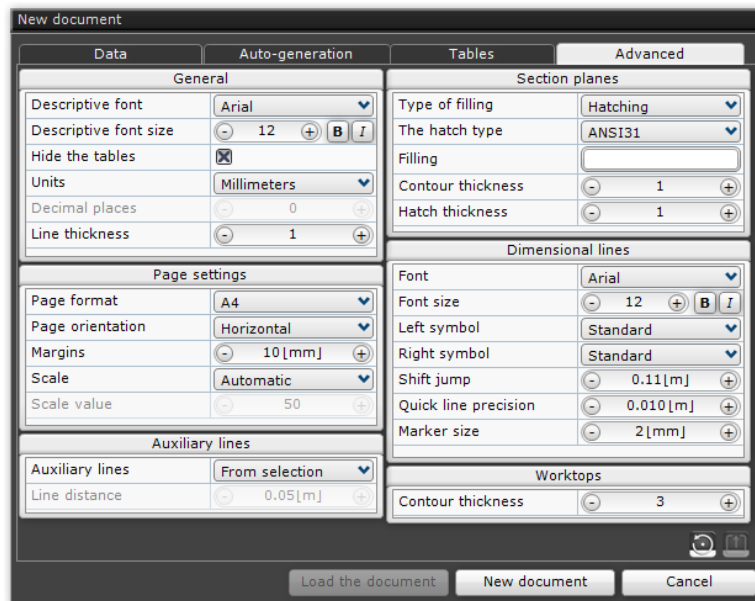


Illustration 6 „Advanced“ tab

The following options are available:

„General“	You can choose: the type and style of the descriptive font (size, bold, italic); the distance units used in the documentation; the number of decimal places given; the thickness of the outline lines; and decide whether tables will be visible.
„Dimensional lines“	Here you can define: dimension font, left and right symbol, shift jump, quick line precision level, and marker size (dimension arrowhead size).
„Page settings“	Here you can set: format, page orientation and margins, and scale (automatic or user). The automatic scale is set to one of the following values: 5, 10, 20, 25, 50, 75 or 100 - in such a way as to show the whole scene in an optimal approximation.
„Section planes“	You can choose the type of filling (color or hatching), the type of hatching, any shade of filling color and the thickness of the outline.
„ Auxiliary lines“	The user can choose how the auxiliary lines will appear in the drawing (from the object, from the selection or no display) and specify the distance of the auxiliary lines from the object.
„Worktops“	Here you can determine the thickness of the outline of individual worktop projections, shown on the sub-pages of the "Worktops" page after selecting "Worktop projections. → Generate" .

Basic module information

In the "**Documentation**" window, you will find four types of menus: left, right, top and bottom. Each of them is responsible for different functions of the module. In the central part of the window a preview of the currently selected page is displayed. Navigating in the module is simple and intuitive. You can get acquainted with all the details in the following subsections.

1. Elements of the "Documentation" window

The documentation window includes:

- two icon bars (at the top and left side of the window);
- a list of hatch types and symbols for electrical, building, and windows and doors (at the bottom of the window);
- panel with page properties, properties of selected objects, list of objects and list of pages (in the right part of the window);
- a preview box in the central part of the window, which displays the currently selected documentation page and, in the case of the "**Technical drawing**" page, also a world direction indicator (wind rose) (Illustration 7) (arrow points north).



Illustration 7 World direction indicator - inactive, edited and rotated

Note: When rotating the compass rose manually, the angle values are displayed to two decimal places. To easily set the desired position, you can enter the angle value manually using the keyboard. To do so, click on the value with the left mouse button, enter the desired value and confirm with [Enter] (Illustration 8).



Illustration 8 Indicating the turnover value

Directly below the preview of the current page are arrows for switching between pages, and a progress bar appears for some operations that require a few moments of processing (Illustration 9).



Illustration 9 Progress bar for saving changes and arrows for switching documentation pages

1.1. Navigating the "Documentation" window

Navigating through the module window is as follows:

- approach and zoom out of view: occurs by spinning the mouse wheel (scrolling);
- centering the view: sets the current page in the centre of the view at a default, convenient distance - requires selecting the "**Centre**" icon from the top menu;
- view dragging: occurs by right-clicking anywhere on the page, holding down the button and moving the mouse - the design behaves as if it were "glued" to the cursor;
- mark objects with a left-click: when you point the cursor at an object (i.e., any element of the documentation page, such as: a text box, a model, a table, a tiled area, etc.), it is highlighted in green (the central part of the following illustration) (Illustration 10). When you click on it with

the left mouse button, the object gains a pink or orange outline, which is a sign that you can edit it. Orange outlines user-added objects (shapes, tables, links, symbols, etc.) they can be scaled, moved and rotated. Pink highlights drawing elements read from the .4CAD environment (freeform elements, furnishings, walls) and elements of the title page and table of contents, which cannot be moved, rotated or scaled in any way;

- select objects with right-to-left area: when you click the left button and move the mouse while holding down the button, a grey rectangular area appears. All elements covered or crossed by the area are selected when you release the button;
- marking objects with the area from left to right: with the analogous action, routed in the other direction - the area is orange, and only the elements fully covered by it are marked;
- you can select more than one object, for example, to change their properties by right-clicking on more objects while holding down the **[Ctrl]** button.

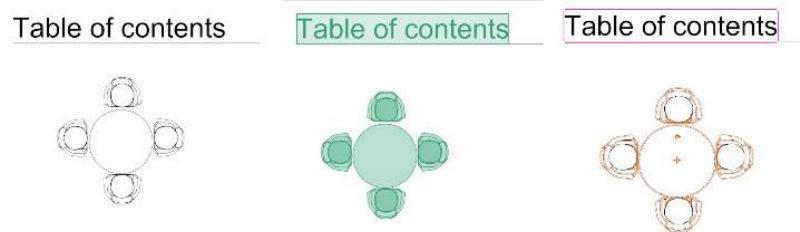



Illustration 10 Objects: unselected, indicated by cursor, selected by left click

Note! in the lower right corner of the page preview there is a "Show Table" button, which, when selected, displays the default table on the currently open page. Once the table is shown, the button will change its name to "Hide Table" - so if the user finds it unnecessary on this page after all, he can easily hide it again by clicking in the same place.

Note: The panel on the right side of the window contains options for pages and objects, as well as two lists: objects and documentation pages. By left-clicking on the selected category of objects, you can edit them at the same time, for example, change the line thickness for all fixtures (add-ons), hide or show them in the project (by clicking on the eye icon ).

Under the page preview, there is a tooltip bar that displays hints for specific operations. For example, when you select the **"Rectangle"** icon, you will see a hint that reads as follows: "Left click your mouse to draw a rectangle or right-click to cancel" (Illustration 11). Sometimes an orange progress bar can be observed in the same place - for example, when generating layouts or autosaving the project.

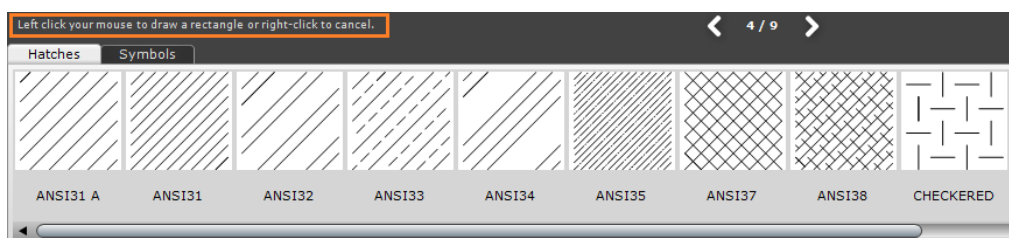





Illustration 11 Hint bar in the module "Documentation"

2. Top Menu

This is an icon bar, containing the basic functions of the module. To see what option a particular icon is responsible for, hover over it and leave it motionless for a few seconds. This will display a label with the name of the function.

The following options are available in the top menu:	
„Save project”	Selecting this function saves the changes made to the current documentation. The same function is available under the shortcut [Ctrl+S] . After selecting this option, wait until the programme has finished saving the document.
„Export to PDF”	<p>Selecting this icon opens the "Export to PDF" window, where the:</p> <ul style="list-style-type: none"> • specify the name of the file and its location.; • you can indicate which pages of the documentation are to be saved (all, current only, selected); • decide whether fonts are to be embedded in the file, that is, whether the set of fonts used in the documentation is to be used to display and print the PDF file, even if the font in question is not installed on the computer (no font substitutions will be made); • compress the file; • check on the view that the right pages have been selected. <p>After selecting the settings, click the "Save" button, and then decide whether you want to open the PDF file right away or not.</p>
„Print”	This option opens the printer selection window. Also available after the shortcut [Ctrl + P] . Pages may take a few moments to load.
„Undo”, / „Redo”	Functions that allow you to undo an operation or redo it. Also available under the keyboard shortcuts [Ctrl+Z] and [Ctrl+Shift + Z] . You can undo up to twenty steps. Undoing some operations requires additional confirmation (e.g., adding and deleting pages, changing settings for all pages, generating layouts and worktop projections).
„Copy”, / „Paste”	Options also available under the shortcuts [Ctrl+C] and [Ctrl+V] , respectively. They allow you to copy and paste symbols, level markup, user-drawn objects, and user-inserted tables and images. <ul style="list-style-type: none"> • on the same page (by indicating with a click the insertion point after selecting the "Paste" icon), • on another page of the documentation, in the same position as the original and maintaining the scale (just after copying the element, go to the selected page and select the "Paste" icon). Each subsequent pasted copy will automatically be ready to be moved - so you need to indicate the insertion point with a click.
„Delete”	Deleting the selected item. Also under the [Delete] button.
„Centre”	Places the page in the center of the view, at the default distance. Helpful when the page is too far away or zoomed in.
„Settings”	Opens a window (Illustration 14) in which you can edit project data, select tables (Illustration 15) and change advanced options (Illustration 16). The types of settings are described in detail in section 2 "Setting up a new project" .
<p><i>Note: You can export the new settings as global, that is, make them used in the future in any other newly created document. to do this, press the "Export to global" button .</i></p>	

„End point”	Another group of icons are " Snap points ," otherwise known as location modes or attraction points. They allow you to achieve maximum precision when drawing even
„Near point”	if you don't point exactly at the right point (the cursor will automatically be drawn to the currently enabled point of attraction).
„Cross point”	The following points are available in the Documentation:
„Middle point”	<ul style="list-style-type: none"> • end (indicates the end point of an object, such as a corner);
„Perpendicular point”	<ul style="list-style-type: none"> • near- indicates any point on the object; • crossing - indicates the point where objects cross (meet).; • middle - indicates the center point on a straight segment or arc • Perpendicular -indicates a point which is perpendicular to the indicated one.
„Perpendicular movement”	<p>The active icon enables drawing support in perpendicular mode (Ortho), in which the cursor movement is limited to horizontal or vertical direction, or the mode in which the cursor is tightened to 0°, 45°, 90°, etc., which increases the precision of drawing.</p> <p>The exact operation of the active "Perpendicular motion" function for each operation is described below:</p> <ul style="list-style-type: none"> • drawing a layout from two points and polylines– pulls the cursor to 0°, 90°, 180° and 270°, making it easier to "catch" them; • polyline editing– the active option draws the moved edited ending point to the horizontal and vertical plane (while editing midpoints, Ortho mode does not work); • dimension line - even if you do not stick to vertical or horizontal, the program draws dimension lines only in these two planes; • fast dimension line - the program allows you to run a fast dimension line on a slant, but the dimension itself applies vertically or horizontally; • drawing a section - draws a line to a multiple of 45°; • move elements- works only in the horizontal and vertical planes; • inserting a copied element - works both horizontally and vertically, so parallel copying is possible - offset values (counting from the original element) can be entered from the keyboard). <p>To disable Ortho drawing or cursor tightening, deactivate the "Perpendicular motion" icon or press the [Shift] key on the keyboard (this disables the function temporarily, until you release the key).</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><i>Note: the [Shift] key does not work when inserting copied items (parallel copying).</i></p> </div>
Measure	Displays grid lines on the page and dimension tape in the programme
„Card editing mode”	<p>In this mode, the user can change the format (choices are A5, A4, A3 or A2), page orientation (horizontal or vertical) and scale of the page, but it is not possible to edit individual page elements. Changing the scale of the page results in changing the size of the drawing (room plan, floor plan, tiles, kitchen cabinet room, worktop drawing, layouts and sections) (Illustration 12).</p> <p>The scale can be changed in three ways - in the right panel using the buttons  , or by typing a value from the keyboard (from 1 to 1000), or by using the mouse</p>

wheel (spinning it or holding it and moving the mouse will zoom in or out of the drawing and automatically change the page scale value in the right panel).

The drawing can also be placed anywhere on the card - by holding down the left button and moving the mouse.

Once the drawing is in the optimal position, simply switch to scene edit mode - the setting will be remembered.



Illustration 13 - different scale of the page (50 and 35) and different positions of the layout

Note: Different options are available in scene edit mode depending on the type of page currently selected.

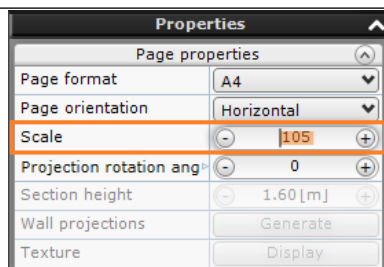


Illustration 12 Properties panel in the upper right corner -option to scale the page

„Scene editing mode”

This mode is the default, it will always be active when you switch to a new documentation page. A scene is called what is on the currently displayed documentation page. In the scene editing mode, you can make changes to the appearance of a given page - for example, complete the technical drawing, add or remove tables, generate sections and layouts, change the properties of elements (such as line colours, degree of transparency, etc.). In a word - you can make any changes in the appearance of a given page, adapting it to your needs and preferences.

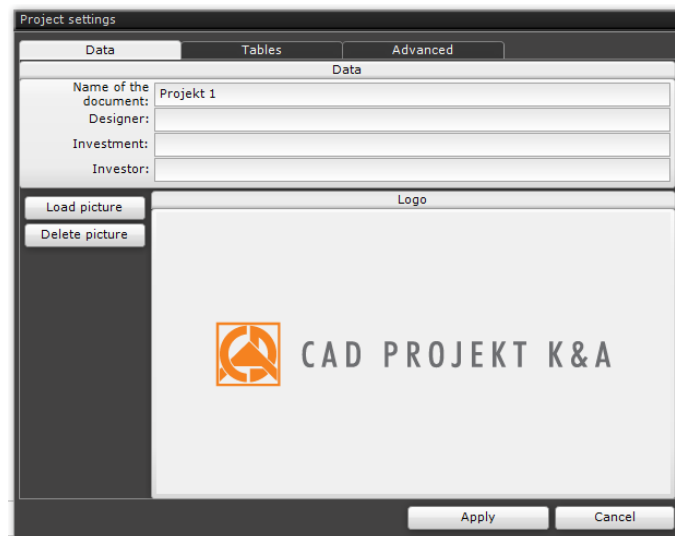


Illustration 14 Settings window - "Data" tab

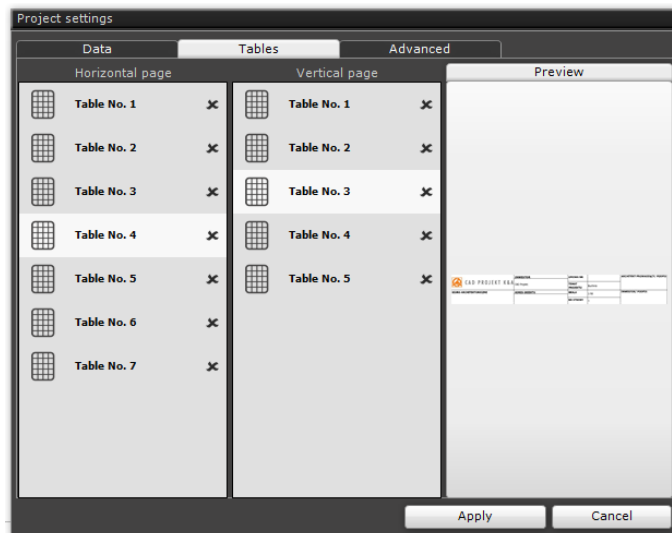


Illustration 15 Settings window - "Tables" tab

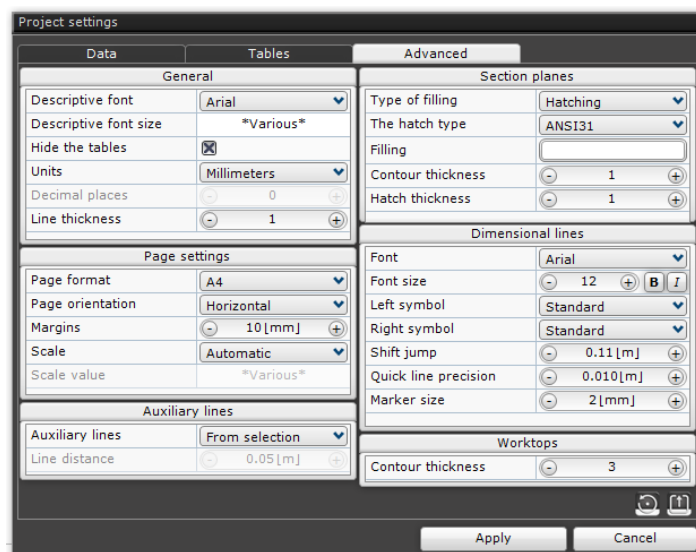


Illustration 16 Settings window, "Advanced" tab

3. Left side menu

Depending on the type of documentation page currently being edited, other options of this icon bar are activated. The available functions are described in the following subsections.

3.1. Icon "Indicator"

The icon representing the cursor marker in the left menu can be used as an alternative to the [Esc] button to deselect previously selected items. It is also useful for terminating operations or editing items.

3.2. Icon "Section"

The **Documentation** module allows you to create straight sections (in one plane) and complex sections (several parallel planes). Sections are created by indicating the points (the start and end points, or possibly the points of inflection of the section plane if a step section is to be created) and the direction in which the section is to face. This can be done in two ways:

- select the icon, left-click in the design, thus determining the beginning of the section, move the mouse in the desired direction, left-click again, thus determining the end (or the inflection point of the section), and after obtaining the desired shape, confirm the end of the drawing with the right mouse button. At this point, an arrow will be displayed, indicating the direction of section generation (Illustration 17) to determine the direction, move the mouse in the appropriate direction and click anywhere with the left mouse button;
- select the icon, click the left mouse button at the starting point and, holding down the button, move the mouse in the desired direction, and when the section reaches the desired point, release the button. The last step is to indicate the direction - another left click on the appropriate side of the line. Note: it is not possible to get a stepped section in this way.

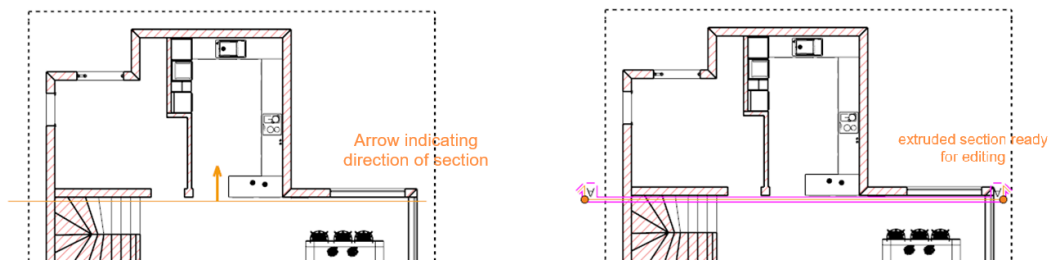


Illustration 17 Section drawing and finished section

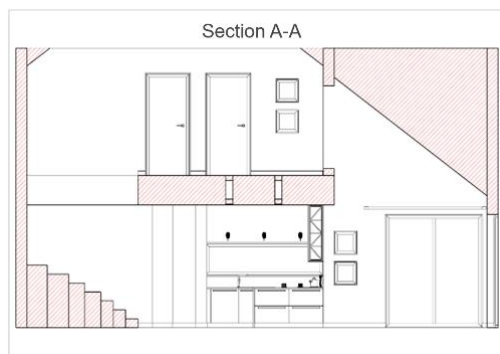


Illustration 18 Resulting cross-section

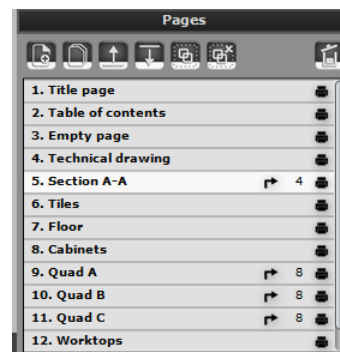


Illustration 19 List of documentation pages

The generated section will appear as a line in the drawing and will be added to the list of documentation pages in the lower right part of the window, as another element under the name of the page on which it was added - for example, to **"Technical drawing"** (Illustration 19). Immediately after drawing, the section is highlighted in pink and ready for editing, and the **"Object Properties"** panel appears at the top right of the technical documentation window, where you can: choose the color thickness and line style of the section, lock its name, choose the size and font type of the description, and specify the index. To remove the pink selection, press **[Esc]**. To edit the section again, click on it with the left mouse button.

Note that the section does not have to be a straight line - you can draw a broken line (with right angles between the sections), obtaining a stepwise section, for example, in order to bypass parts of the design that are not to be seen on the section or obscure important elements. stepped section and their direction are indicated by clicking left mouse button, moving the mouse in the desired direction and clicking again. (Illustration 20).

Note: To move a section line or change its length, edit the section and then left-click on the orange dot at its end (Illustration 20). To change the length, move the mouse along the dimension line, and to move, move the mouse in a plane perpendicular to the dimension line. In the case of a stepped section, additional editing points are available where the section line bends.



Illustration 20

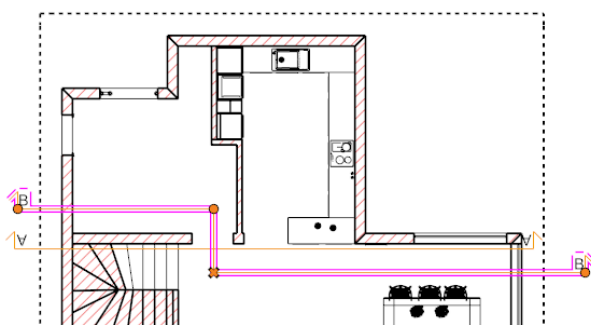


Illustration 21 Stepped section



Illustration 22 Stepped section effect


To rename a section, double-click with the left mouse button on the section name (Illustration 23). An editing window will appear, where you can enter the text, change the type and size of the font. To approve the change, just close the window with a cross .



Illustration 23

The index of the renamed section will be automatically changed to „ **Proper name**“, and the section name will be blocked - meaning that it will not be taken into account for automatic numbering. If the user wants to change the numbering order of the sections, he can do so either by renaming them to the corresponding letter of the alphabet, or by changing the value of the index.


"Field adjustment" option is automatically enabled (Illustration 24). Influences the adjustment of the shape of the text box to the size of the entered text (e.g., length and number of lines). Changes will be saved when you close the window with a cross .



Illustration 24 Section description text editing

The new section name will appear in the list of documentation pages in the right-hand menu window. It is also possible to change the name from this list - just find the section in the page list, double-click with the left mouse button on its name and type the new one. The change will be visible on the page "Technical drawing" and on the section page.

After selecting a section and right-clicking, a context menu (Illustration 25) appears, where you can:

- go to the documentation page, showing the section;
- change direction (turn the section in the opposite direction);
- add section point – That is, to divide it into parts and thus omit parts of the project that are not desired on the section (to determine the point of division, click on the edited section with the left mouse button in the place of interest and then move the mouse in the desired direction; then you can change the shape of the section or cancel the division by clicking on the orange cross that appeared at the place where the node was added).

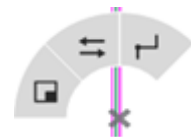


Illustration 25

3.3.Creating individual projection

Two functions are available for the application of the individual projection:

- „Wall projection” – is created by left-clicking on the wall for which it is to be generated (when the cursor is brought close to the wall, an arrow indicating the direction of the layout will appear);
- „Projection based on 2 points” – is created by indicating the start and end points with a click and confirming the direction in which the layout is to be turned.

When generated, the layout is added to the list of pages under the page that was selected when the layout was generated. This can be "Technical drawing", "Tiles" or "Cabinets" (Illustration 26). The names of the lays are consecutive letters of the alphabet (when there are more lays than letters of the alphabet, they begin to be called AA, etc.), and the names of the lays are the letters of the alphabet).

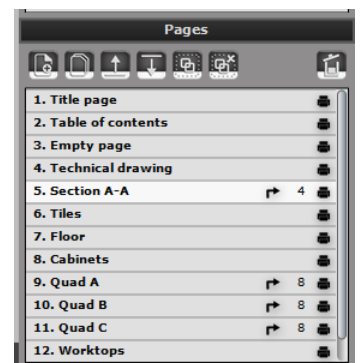


Illustration 26 List of pages and quads

To rename a quad, double-click with the left mouse button on its default name (Illustration 27) .A window will appear where you can type in the text, set the type and

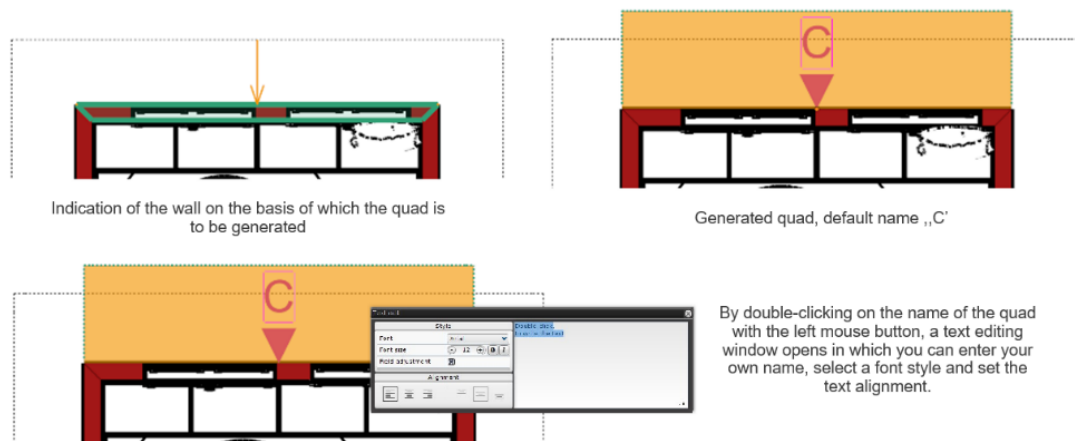



Illustration 27 Editing the name of the quad

size of the font and the alignment of the text. The changes will be saved when you close the editing window with a cross .

The new name of the quad will be visible in the list of pages in the right menu window. The name can also be changed from this list - just expand the contents of the parent category, find the layout, double-click with the left mouse button on its name and type the new one. The change will be visible on the page where the layout was generated (e.g. "**Technical drawing**") and on the page presenting the layout.

The generated quads can be edited in terms of depth and extent to the right or left (e.g. they can be limited to parts of the walls and thus create a detailed documentation of the project). To do this, click on the quad designation and move the border of its area (marked in orange) in the desired direction, widening or narrowing it, using drag-and-drop. Once you have navigated to the page showing the projection, you can also select the '**Do not trim the section plane**' option, which in this case will work vertically - and will display in full the parts of the objects previously cut off by the incisal.

Quads can also be deleted - either by using the "**Delete**" icon from top menu, after first selecting the quad on the technical drawing, or by opening the page showing the quad and selecting the "**Delete Page**" icon from the bar above the list of pages on the right menu.

Note that the quads can also be generated collectively: when you go to the "Technical drawing" page, the right menu offers the option "Wall projections → Generate", the selection of which creates quads of all walls in the project. This option is also available during the initial configuration of the documentation, after selecting "Technical drawing".

3.4. Apply custom shapes

The icons available here allow you to draw shapes (lines, circles, rectangles) in your documentation, allowing you to:

- introduction of additional information on page,
- quickly cover up elements that are to be invisible in a given projection,
- drawing auxiliary lines, e.g., to evenly apply references,
- outlining and applying hatching to objects that were created in the .4CAD environment using the "**Free-formed objects**" tool (i.e., platforms, floors, casings and plinths).

The following options are available:

„Polyline”

- when drawing a polyline, you can define its parameters: the lengths of individual segments and the angle at which they are to be drawn;
- Switching between functions is done with the **[Tab]** key. (Illustration 28);





Illustration 28 Editing the length and editing the angle of the line

- to draw a line of a certain length, click the left mouse button at the starting point, move the cursor in the desired direction, type the length from the keyboard, confirm the value with the left mouse button or the **[Enter]** key, and then use the right mouse button to stop drawing;

- to define both the length of the segment and the angle, press **[Tab]** after entering the first value and only after entering the second value as well, press **[Enter]**;
- using this function, you can also create arcs - to do this, select a previously drawn line, and then use the left mouse button to grab its center point and move it away in the desired direction;
- once drawn, each line can be edited - just select it with the left mouse button and use the endpoints to adjust its length or change its properties (color, style and thickness) in the panel in the upper right corner;
- lines and arcs, once drawn, can be rotated and moved (using the arrow and cross that appear when they are selected);
- selecting the **"Include drawing limits"** option causes parts of polylines drawn outside the working area not to be displayed.

„Circle”

- when drawing a circle, you can define the length of the radius by typing its value manually and confirming it with **[Enter.]**;
- the drawn circle can be moved by selecting it with the left mouse button and using the crosshair , and also change its size, using the arrow  (Illustration 29).

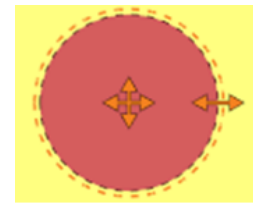


Illustration 29 Marked circle, visible cross for moving and arrow for stretching

„Rectangle”

- you can manually define the lengths of the sides of the rectangle - to define the length of one side, just after selecting the icon and left-clicking at the initial point of the rectangle, type the desired side length from the keyboard and press **[Enter]** to confirm it - the other side will draw with the length indicated by the mouse cursor;
- to define both sides, enter the value of the first, then press the **[Tab]** button - this will save the first specified value and move to edit the second - after entering it, approve the entire operation with the **[Enter]** button;
- after drawing a rectangle, each side of the rectangle can be turned into an arc, obtaining different shapes (Illustration 30);
- defining arcs is done with the mouse based on the displayed current angle values;

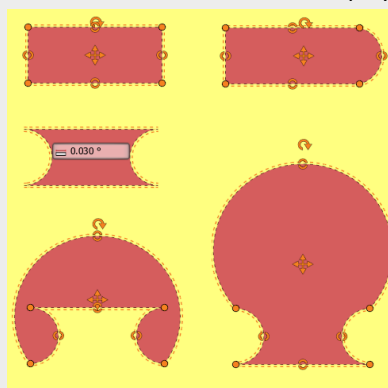


Illustration 30 Output rectangle and examples of shapes that can be obtained from it

„Insert the surface”

- this option is only active for the page with the floor plan;
- allows you to distinguish additional areas on the floor (for example, marking the area of several different rooms (Illustration 34));
- drawing of surfaces should be based on snap points;

- after selecting the icon, successive surface vertices are pointed out with the left mouse button at corresponding points in the project;
- to stop drawing, click anywhere with the right mouse button or press **[Esc]**;
- each newly drawn area is included in the summary that appears in the upper left corner of each documentation page.(Illustration 34);
- deleting the surface will update the dimensions given in the legend;
- after selecting a surface and right-clicking on it, the user gets access to a context menu with additional functions(Illustration 31);
 - add a vertex,
 - delete vertex,
 - cut out the hole inside the area,
 - hide/show numbering,
 - To insert a new vertex, after selecting the **"Add vertex"** function, select the section where the vertex is to appear, and then by moving the mouse, designate the new surface shape;
 - To delete an unneeded vertex, select the **"Delete vertex"** function and point to it with a left-click (Illustration 32);
- procedure for adding floor area shown in Illustration 33;

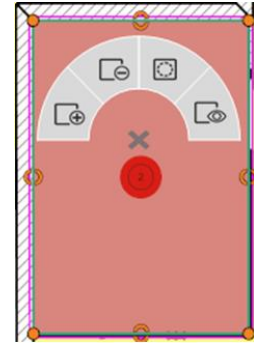


Illustration 31 Context menu, editing the inserted surface

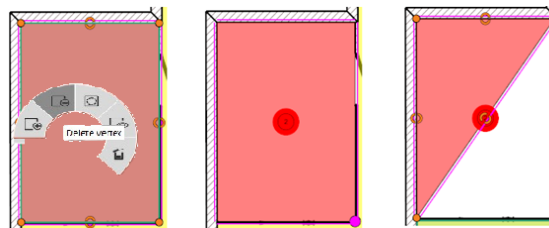



Illustration 32 Removing the top of the drawn surface

- the function of cutting holes in surfaces is used when you want to include areas where different materials have been used in the design, and you do not want to incorrectly increase the total area of the floor surface (cut a hole, and then draw a new surface in the empty space, as described in section [6.3. "Changing the shape and adding new floor areas"](#));
- before drawing the hole, it is a good idea to prepare yourself auxiliary lines (using the shapes **"Polyline"** or **"Rectangle"**);
- the plot numbering can be moved freely using the crosshairs , having first clicked on its designation with the left mouse button.

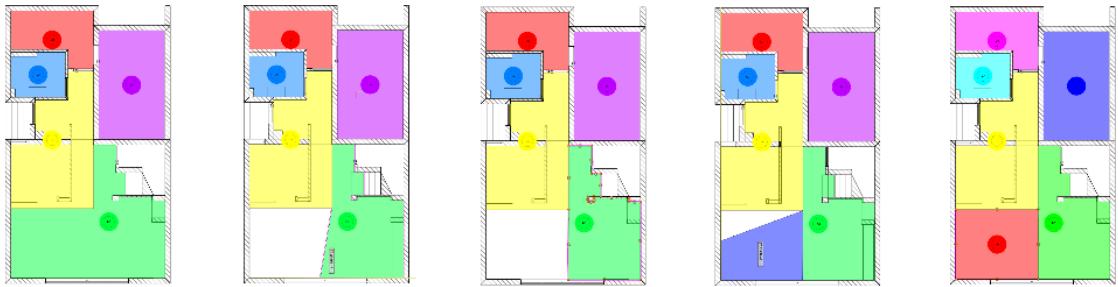


Illustration 33 Stages of adding a surface - from left: reducing an existing green surface by the appropriate area by moving the vertices, drawing a new surface (dark blue), added surface (red))

After selecting the drawn shape, options appear in the upper right corner of the window (Illustration 35) that allow you to change:

- type of filling,
- filling color (except for surfaces added on the floor - in their case this option is unavailable),
- include drawing limits (i.e. control of those parts of the shape which are drawn outside the working area);color, style and thickness of lines.

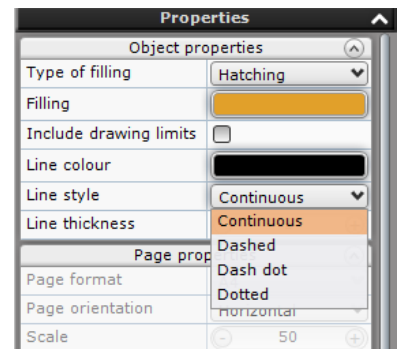


Illustration 34 Properties of shapes

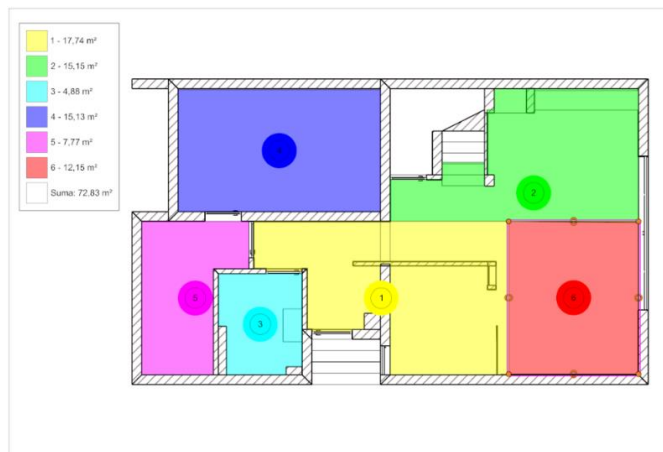


Illustration 35 Use of additional areas to represent the area of each room in the project

3.5. Dimensioning tools

There are two types of dimensioning tools to choose from, described in the following table.

3.5.1. Types of dimensioning tools

Types of dimensioning tools	
Dimensional line	It is used to dimension the distance on the page by indicating the beginning and end of the dimension. Before dimensioning with it, you must enable the selected snap point. You can dimension, for example, electrical symbols, construction symbols and other objects not visible to the quick dimension line - such as accessory objects (furniture, decorations, etc.). With the help of the dimension line, you can apply dimensions manually by entering the dimension from the keyboard, for example, to enter equal distances between halogens. It proceeds as follows: <ul style="list-style-type: none"> • click on the dimension line icon;

- then click on the project;
- move the mouse in the direction that interests us;
- enter a value from the keyboard, e.g. 600;
- confirm the entry with the left mouse button or the **[Enter]** key;
- Move the mouse away again and repeat the action;
- right-click to end dimensioning.

Quick dimension line

It is used for dimensioning walls, windows, doors and kitchen cabinets. In its case, there is no need to turn on additional snap points, because the program itself recognizes objects ("catches" the appropriate points on the scene when moving the mouse and dimensions them). To use it, you need to:

- select the "Quick Dimension Line" icon;
- left-click on the starting point;
- left click on the end point;
- move the mouse to determine the offset of the dimension and click the left mouse button;
- To terminate the operation, you can right-click, select the **"Indicator"** icon or the **[Esc]** button.

You can set the precision of a fast dimension line, that is, specify what minimum distance two points in the design must be from each other in order for both to be dimensioned using it - if they are closer to each other than this set value, the first point will be taken into account when dimensioning, and the second will not. This allows you to omit points that are irrelevant.

To define the precision of a fast line, click on the **"Settings"** icon in the top menu and in the **"Quick Line Precision"** field in the **"Dimensional lines"** panel, enter from the keyboard or set using the +/- buttons the desired value (maximum 1 meter).

Dimensioning of arches

It is used to apply dimension lines for radii of circles and arcs in the case of worktops and user-drawn shapes (it is not available for arbitrary elements [e.g., platforms] and columns and arched walls loaded from the .4CAD environment). To apply a dimension, select the icon and left-click on a circle or arc, then move the mouse, indicating the direction of the dimension's position on the drawing. when the desired position is obtained, left-click again. One arc can be marked with only one dimension.

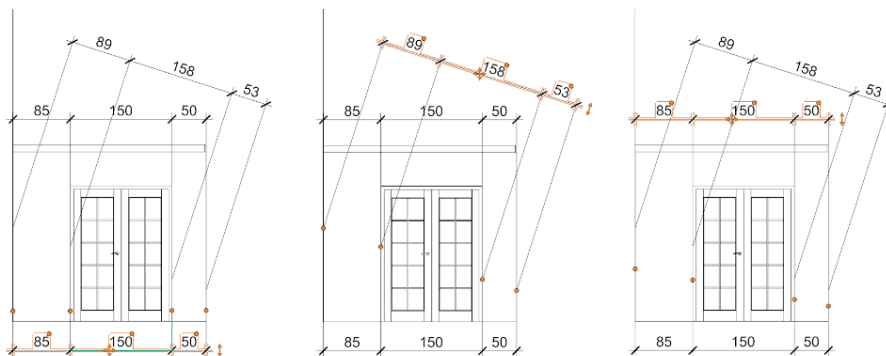


Illustration 36 Dimensions created using the quick dimension line - from left: drawn horizontally, drawn diagonally without using the "Perpendicular motion" function (distances calculated for the diagonal plane), drawn diagonally with the "Perpendicular motion" function enabled (distances for the horizontal plane)

Note: When using a quick dimension line, it is important to keep the horizontal and vertical, because when dimensioning at an angle, the programme gives the actual distance between the 'captured' points, not the absolute horizontal or vertical distance (Illustration 37). However, sometimes it is difficult to indicate the relevant points by moving only vertically and horizontally. This is where the 'Perpendicular movement' function comes in handy, which, when switched on, gives the absolute distances measured in the horizontal or vertical plane for lines drawn diagonally, rather than the actual distances between the indicated points. The dimension line is also added perpendicularly.

3.5.2.Editing dimensions

Each dimension immediately after being applied is marked in orange, which means that it is available for editing. It can be done in three ways - using the options available in the "**Object Properties**" panel, using the mouse, or using the context menu.

The "**Object Properties**" panel becomes active when you select a dimension line with a left-click. You can here:

- change the line color and the color of the descriptive text;
- select the marking of the right and left symbols;
- indicate where the auxiliary lines are to begin - and whether they are to be present at all;
- change the size of the marker (symbol) and the descriptive font;
- select the type of descriptive font, add bold and italics.

These options can also be changed in the "**Project Settings**" window, available under the "**Settings**" icon in the top menu. In this case, the changes will be applied to the entire current project. The settings here can also be saved to global so that they will be available the next time you run the module.

Editing dimensions with the mouse follows the orange markers: cross, dots and double-sided arrows (Illustration 38). Its principles are as follows:

- when manually correcting dimensions, use the snap points in the top menu;
- the orange cross is used to move the dimension - click on it with the left mouse button and move the mouse, all the while holding down the button, until the desired position is reached;
- after left-clicking on point at the end of the auxiliary line, you can change the shape of the dimension line by moving the mouse in the desired direction;
- left-clicking on the point next to the description field dimension allows you to reposition the description - when you move the mouse, an arrow appears and the description takes the form of a link (Illustration 39);
- double-clicking on dimension description allows you to edit it independently of the others by entering any numbers or other characters;
- after clicking on the arrow, moving the mouse up and down, you can change the length of the auxiliary lines (move the dimension away from or closer to the dimension from the object to be dimensioned; the dimension moves in increments and the move increment can be set in the "**Project Settings**" window under the "**Settings**" icon in the top menu) (Illustration 40).

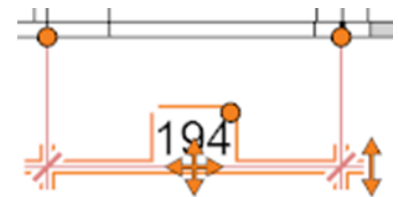


Illustration 38 Edit mark

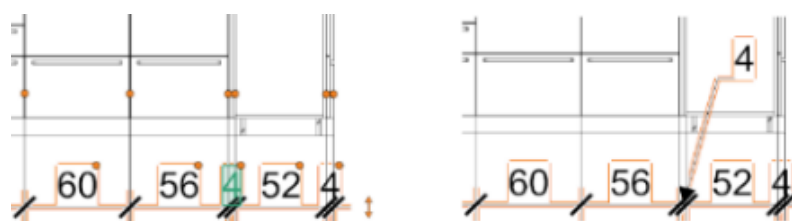


Illustration 39 Change the position of the dimension description

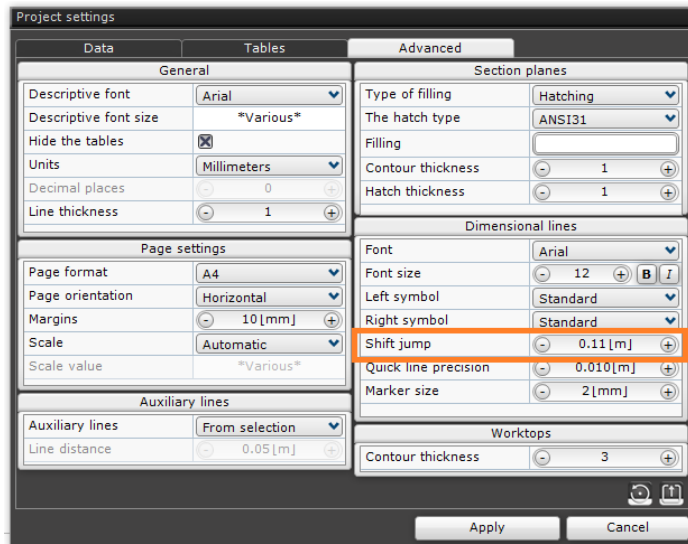


Illustration 40 "Shift jump" option for dimension lines

The context menu, available under the right mouse button after clicking on a dimension line with the left button, allows you to:

- altered appearance (Illustration 41);
- adding new dimension segments (a new dimension can be added outside or anywhere on an existing line, dividing an existing segment) (Illustration 42) The dimension being edited is highlighted in green (you can enter its value from the keyboard);

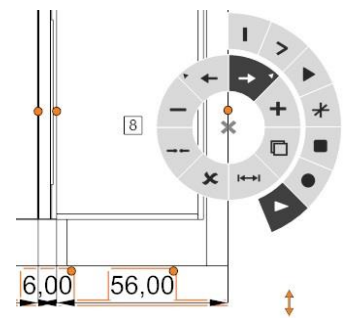


Illustration 41 Dimension context menu - various symbols to choose from

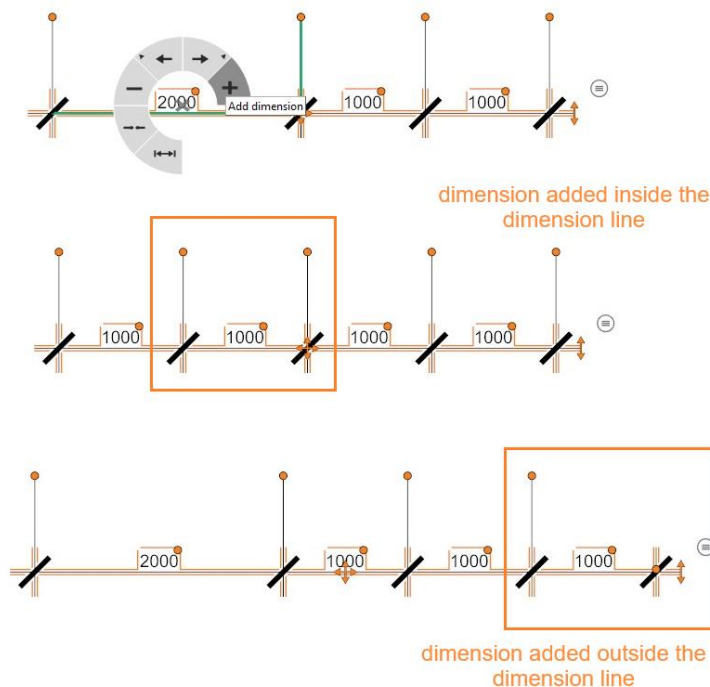


Illustration 42 Adding a new section of dimension line - outside and inside

- copy the entire dimension line;
- removing the entire dimension line;
- merging, that is, combining all sections into a single dimension line (Illustration 43).

- separating sections of dimension lines so that they can be edited separately (e.g., placed at different distances from the object) (Illustration 44);
- removal of individual sections of dimension lines;

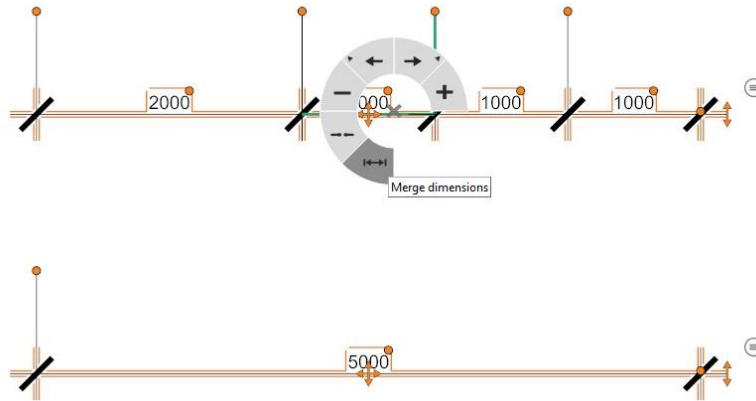


Illustration 43 Merging dimensions

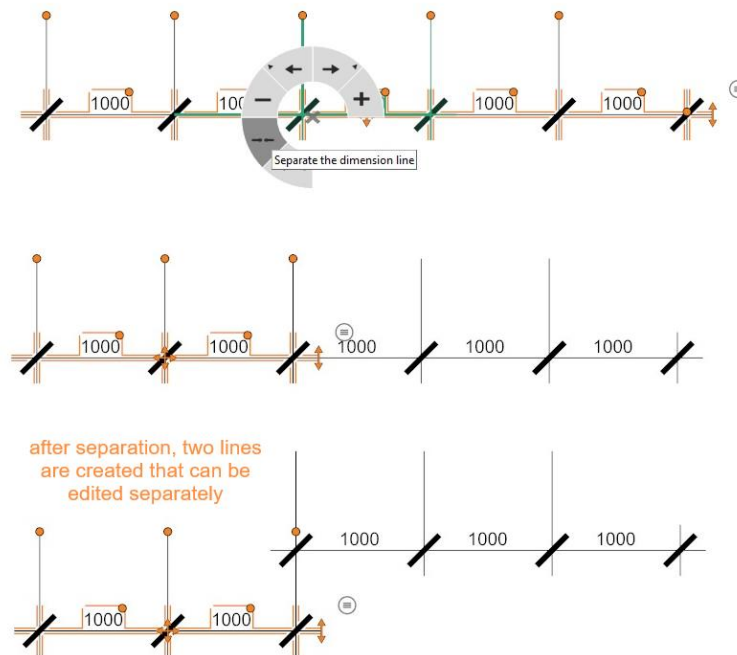


Illustration 44 Dimension separation

When splitting and deleting sections of a dimension line, it is critical to properly mark the section to be affected by the operation. The selection refers to the node of the dimension line, which is indicated by pointing the cursor to the appropriate point on the line. The selected section is displayed in green (Illustration 45).

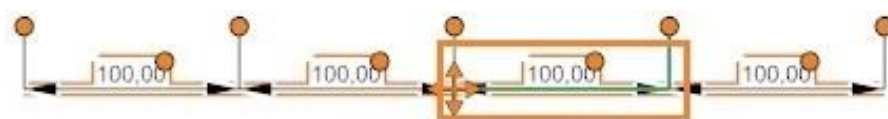


Illustration 45 Marking the nodes of the dimension line - visible green line marking

To select the node to the right of the dimension description, point the cursor to the dimension line to the right of the description (for example, to the right symbol). In this situation, the section to the right of the indicated node will be separated (Illustration 46). To select a node to the left of the description, hover the cursor over the dimension line to its left (e.g. left symbol).

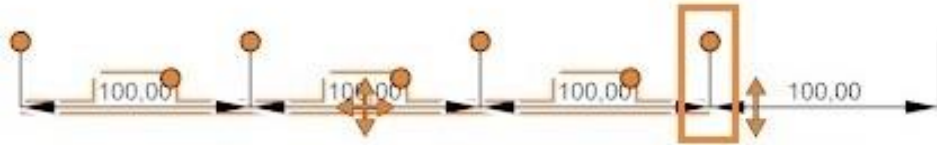


Illustration 46 Separation of dimension lines - the indicated node has been cut off, on its right side there is now a separate dimension line that can be independently edited

In the case of deletion - if the right node of the section ending the dimension line on the right side is selected, the section will be deleted (Illustration 47).

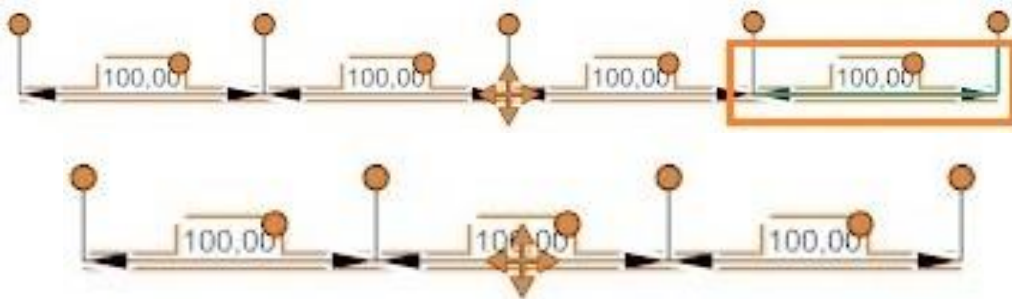


Illustration 47 The effect of removing the selected section (final) - the removal of the indicated node has occurred, and with it the entire dimension

If, on the other hand, the left node of such a section is selected, it will be merged with the section on its left side (Illustration 48).

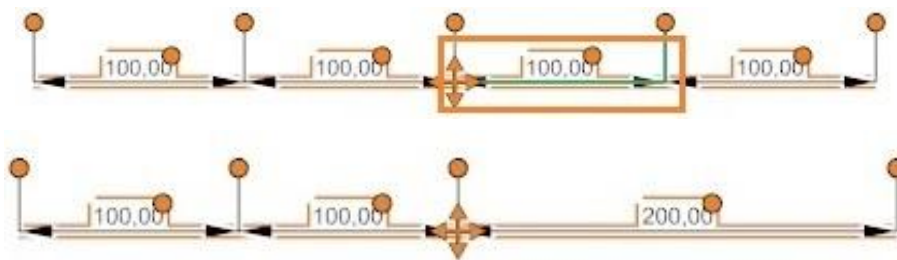


Illustration 48 The effect of removing the marked section (middle)-there was a merger of it with the adjacent section, lying on the other side of the marked node

Similarly - if the left (outermost) node is selected for the section ending the dimension line on the left, the section will be deleted, while if the right node is selected and the **"Delete dimension"** from pop-up menu is selected, the section will be merged with the adjacent one.

3.6. „Level" icon

This marker can be used to mark the level of various elements on cross-sections, layouts and plan views, such as stairs or the height at which a tiled area begins and ends on a wall.

After clicking on the "Level" icon in the left menu, all you have to do is indicate with a click the point where the level marker is to be placed in the project. Once inserted, you can edit the description of the indicator and its properties in the right menu (line and text color, type, font size) (Illustration 49).

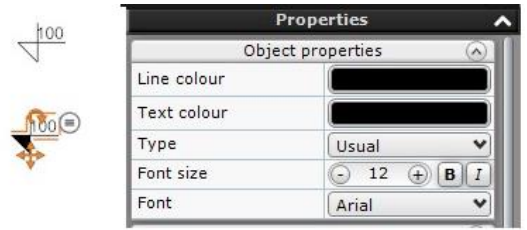


Illustration 49 Level marker properties panel and two types of markers

3.7. Icon "The beginning of tiles"

It is a symbol for two vectors, available for multiple sites (sites that can contain tiles). It is used to determine the beginning of tile laying. It can be placed in the documentation to indicate to contractors from which edge they should start applying tiles. To do this, click the "The beginning of tiles" icon and left-click to indicate the point in the project where the marker is to be inserted.

3.8. Applying text and references

The user can add notes and links anywhere on any page. After left-clicking on the "Insert Text" or "Reference" icon, you must - also with the left mouse button - indicate the location of the note or link, and then double-click in the text box that appears.

This will open a text editing window where you can type in the content, set the font properties, and enable text box adjustment (automatically resize it so that all the text is visible) and alignment (Illustration 50).

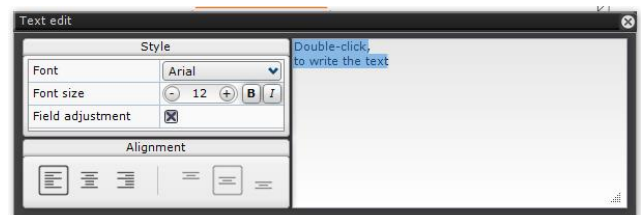


Illustration 50 Text editing window

You can move the inserted text or link, rotate it, change the color of the displayed lines or text and the degree of their transparency (RGB and A values), set the font size and type. For the text, you can additionally choose the color of the border, decide whether to follow the text box to the text you type, and for the link - choose the type of arrow marking.

To move or rotate a text or reference, click on it with the left mouse button, then use the crossed arrows at the center of the reference line (using drag-and-drop) or the arrow (near the reference line) (Illustration 51).

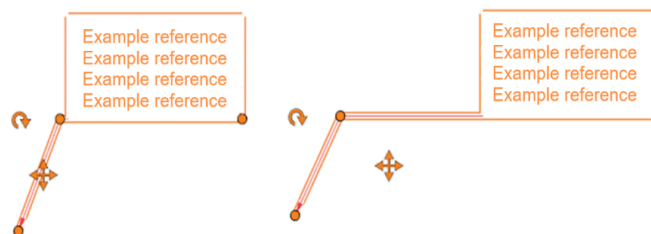


Illustration 51 Different shapes of the same reference

In addition, the length, shape and direction of the reference line can be adjusted using the orange marked points (Illustration 51). By clicking on the point next to the arrow, you can stretch the line or position it in a different way. On the other hand, by clicking on a point in the corner of the text box where the line does not reach, and moving it to the right or left, you can achieve a collapse of the dimension line. By then clicking on the inflection point, you can freely shape the shape and position of the link.

3.9. Inserting and editing table

To insert a table on any documentation page, select the **"Insert Table"** icon and choose the settings in the table wizard (Illustration 52), that is, specify the number of columns and rows and the dimensions of the table. You can also choose whether columns or rows are to be created first (if you select **"Start by creating columns"** when you later change the width of a column with the mouse, it will expand or contract in its entirety, and if you selected **"Start by creating rows"**, only the width of one row will change).

Once the table is generated, you can adjust the size of the table using the mouse by left-clicking on the edge of the table and stretching it as desired, and proceed to edit individual cells. To do this, left-click on a cell, and then expand the context menu after right-clicking on it.

Note: To navigate the context menu of the tables:

- To open it, click the right mouse button,
- to see what an icon is for, hold the mouse pointer over it (still, without clicking),
- To use a function, click on the icon with the left mouse button and follow the instructions,
- some icons have a small arrow >, which means that there are several different options available within them - to see them, click on the icon in question (this will expand the next row of icons) (Illustration 52).

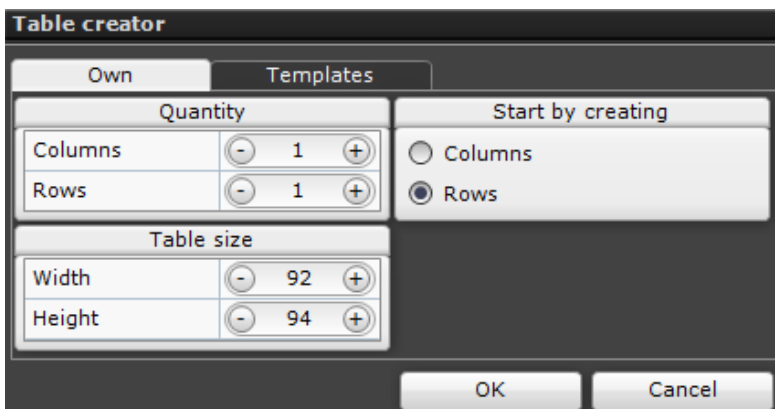


Illustration 53 Table wizard window

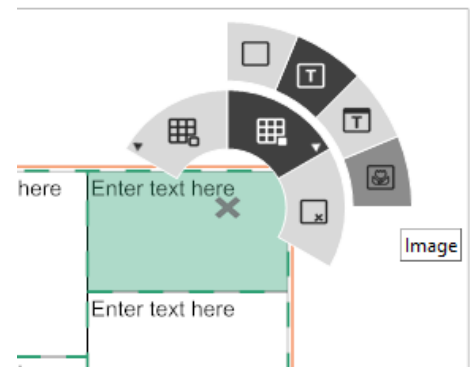


Illustration 54 Context menu for the table

The following options are available in the context menu:

„Edit cell“	Each table cell can be defined as: <ul style="list-style-type: none"> • empty, • containing text or text with a title, • containing an illustration (by default it will be the logo saved in the project settings - you can replace it with another image by changing the settings or by double-clicking with the left mouse button on the image).
„Delete table“	Deletes the entire table.
„Delete cell“	Deletes the selected cell (the neighbouring cell will merge with the deleted cell).
„Insert cell“	<ul style="list-style-type: none"> • „Specify from the table“ - selecting this option opens the "Table Creator" (Illustration 53) and allows you to insert an additional table in the edited cell.

- „Add singly” – When you select this function, point the mouse cursor at the cell you want to divide, and then position it so that a green view of the row (if you want to add a row) (Illustration 55) or column (if you want to add a column) (Illustration 56).

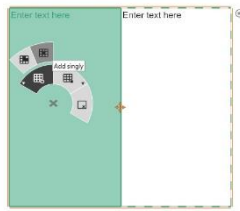


Illustration 56 Adding a column

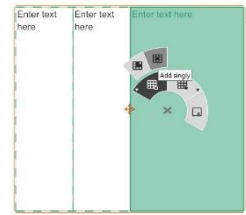



Illustration 55 - Adding a row

Note: if the row or column preview displays in red, it means that there is not enough space to add a new cell.

„Save the template”

Once you have determined the appearance of the table, you can save it as a template for future use. To do this, click the "Save Template" icon  and in the newly opened "New table template" window, enter its name (Illustration 57). The template will be added to the list of templates in the table creator window (Illustration 58).

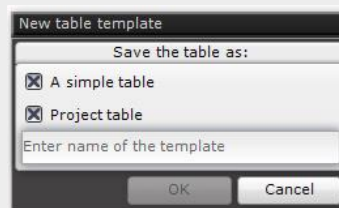


Illustration 57 Specifying the name of a new table template

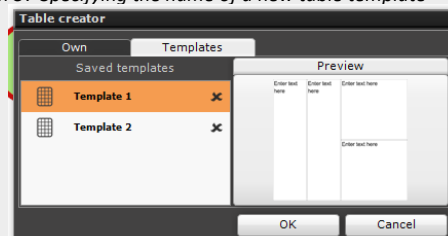


Illustration 58 New template saved in the list in the Table creator window

To delete a template, click on the cross next to its name. The program will ask you to confirm the operation.

3.10. Inserting images

Inserting images is done by left-clicking on the **"Insert Image"** icon and then on the project page. A field will be inserted in the indicated place, which can be moved and rotated (Illustration 59). The arrow on the top edge of the field is used for rotation. Moving can occur in two ways - either by left-clicking on the crossed arrows in the center of the field and using drag-and-drop, or by right-clicking on any point in the field and using the same method.

After double-clicking with the left mouse button, you can indicate the location of the graphic file to be inserted. Once the graphic is inserted, the box can be stretched - this requires clicking on it with the left mouse button and pointing the mouse cursor at its edge or corner (a double-sided arrow will appear). You can also change the color and transparency of the border and background of the image.



Illustration 59 Field for inserting images into documentation

4. Right side menu

This menu is divided into four parts: **"Page Properties"**, **"Object Properties"** (this panel appears when an object or objects are selected), **"Objects"** and **"Pages"** in the **"Properties"** panel, various options appear, depending on the currently displayed documentation page. the **"Objects"** panel contains a list of elements visible on the currently displayed documentation page - here you can control their visibility or edit them collectively. The **"Pages"** panel contains a list of all pages of the generated documentation.

4.1. Panel "Page Properties"

There are several options available in this box, depending on the page you are currently viewing. They are described in the table below. The first three can be edited after entering **"Card editing mode"**.

Options available in the "Page Properties" panel		
Page format	You can choose the format for each documentation page. There are six different sizes to choose from: A0, A1, A2, A3, A4, A5.	Options available for all pages in card editing mode.
Page orientation	Each page can be oriented horizontally or vertically (if the visibility of the default table is enabled, the table selected for the page orientation will be displayed).	
Scale	Automatic (with a value of 5, 10, 20, 25, 50, 75 or 100 depending on which approximation is optimal at the time) or indicated by the user.	Option for pages: "Technical drawing," "Tiles," "Cabinets," "Floor," and "worktops"
Position	The table of contents can be placed on the right or left side of the page.	Options available for the table of contents.
Font size	You can set the size of the displayed font in the interval from 1 to 50. Text bold and italic options are also available.	
Font	There are seven types of fonts to choose from.	
Section height	Allows you to set the desired section height, i.e. the level at which a section of the room is made in the plan view, which affects the visibility	Option for pages "Technical drawing", "Tiles",

	of objects (for example, to show ceiling lamps you should set the section height equal to the height of the ceiling).	"Cabinet" and "Floor"
Texture	Option " Display " - adds texture to all 3D models in the project (add-ons and kitchen cabinets and worktops).	Options available for page " Technical drawing "
Wall projections	„ Generate ” option - adds sub-pages with layouts of all walls in the project that are longer than 1 metre to the home page. Note: Partition wall layouts are generated from two sides.	
Fulfilment of tiles	There are two options to choose from, " Color " and " Texture ". The former causes the default colors to be displayed on all tiled areas, while the latter causes the true tile coloration to be shown. The operation of this option is shown in the illustration below the table (Illustration 59).	Options available for the " Tiles " page
Linear contour	Allows you to control the visibility of the linear outline of ceramic tiles (grout grid lines). The operation of this option is shown in the illustration below the table (Illustration 59).	
Markers size	In this field you can change the size of the numerical markings of the kitchen cabinets(Illustration 60).	Option available for page " Cabinets " and „ Quads. "
DXF files	The option allows you to save worktop drawings in DXF format. This is a 2D and 3D drawing saving format supported by CNC machines.	Options available for the " Worktops " page.
Worktops projections	Selecting this option automatically adds pages to the documentation showing single, dimensioned worktops (one worktop per page).	



Illustration 60 Different representations of tiled areas - from left: texture with grout outline, color with grout outline, texture without outline, color without outline

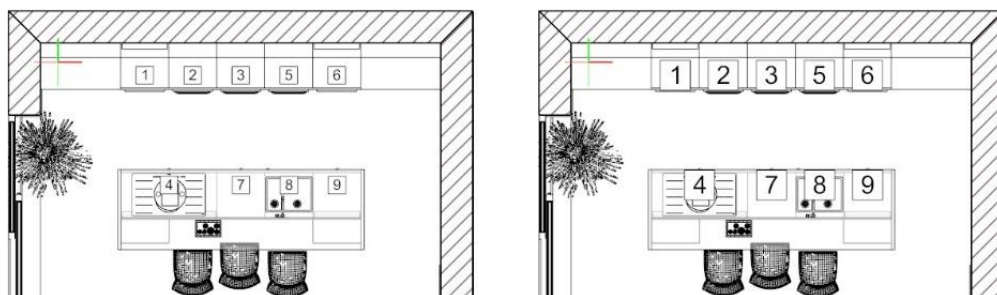


Illustration 61 Different size of cabinet markers

4.2.,,Object properties” panel

This panel appears in the upper right corner of the technical documentation window after selecting with the left mouse button the selected object on the currently displayed documentation page (e.g., on a table, text, inserted reference, wall, piece of equipment, etc.).

Options available for edited objects	
Sectional planes	Filling type, filling color and line color.
Quads	Tag and description color,, font size and type, index.
Sections	Line color, line thickness and style, font size and type, index.
Shapes drawn by the user	Filling type, filling color, color and line style and thickness, as well as include of drawing limits(if part of the shape lies outside the selection area, it may not be displayed).
Dimensions	Line color, text color, types of termination symbols, visibility of auxiliary lines and their distance from the object, size of markers and font, type of font, and ability to reset descriptions.
Level marker	Line color, text color, tag type, font size and font type Line color, text color, tag type, font size and font type.
Texts	Border Colour, background color, text color, field adjustment, font size, bold, italic, font
Reference	Line Colour, text Colour, types of arrows symbols, dock to page, reverse mirror and font, font size, bold and italic.
Tables inserted by user	Location, font type and size, bold, italics, text, border and background colour. <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"><i>Note: Each table item is editable - after double-clicking with the left mouse button.</i></div>
Tables with data of kitchen cabinets	Options for displaying columns of the table, containing the following data: cabinet name, dimensions, level, presence of a hinge, type or comments. You can also restore the default settings, add a new group of cabinets, change the font size (the table size will automatically adjust), and set the position of the table (in one of the corners or any). <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"><i>Note: Each table item is editable - after double-clicking with the left mouse button.</i></div>
Tables with worktop data	Options for displaying columns with the following data: worktop name, dimensions, level, type or comments. You can also restore the default settings, add a group of worktops (e.g., kitchen, bathroom, wall panels), change the font size and set the position of the table. <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"><i>Note: Each table item is editable - after double-clicking with the left mouse button.</i></div>
Images	Border color, background color.
Legends: tiles and paint, symbols, floor surfaces	Size of the mark, font, font size, bold, italic, legends location, border and You can also restore the default settings.
Objects from the project (3D models)	Filling type, filling and line color, contour thickness, section plane trim (cutting off at the height of the plane or showing the entire object, including over the intersection plane) (Illustration 61), simplify the contour (Illustration 62), and the ability to change to a symbol.

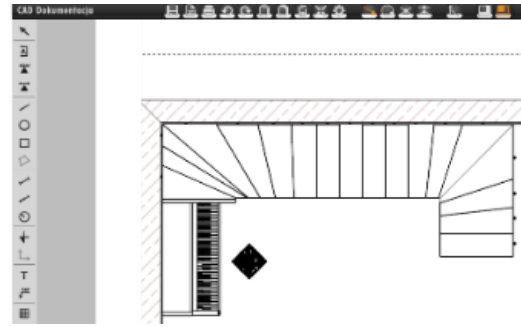
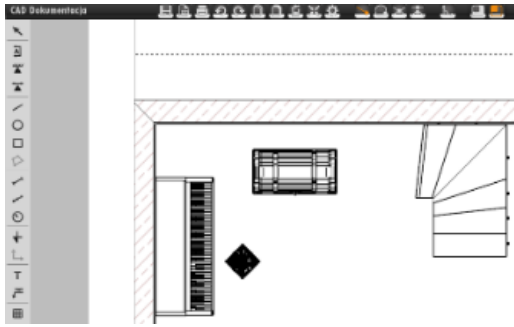


Illustration 63 Stairs cut off by the section plane and without cutting with it

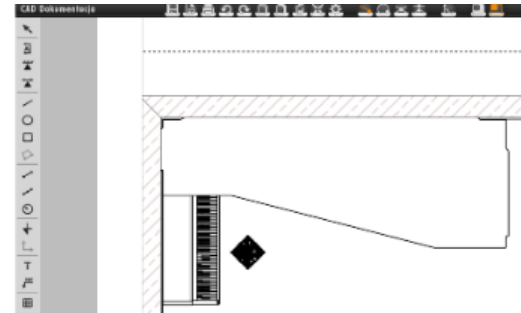
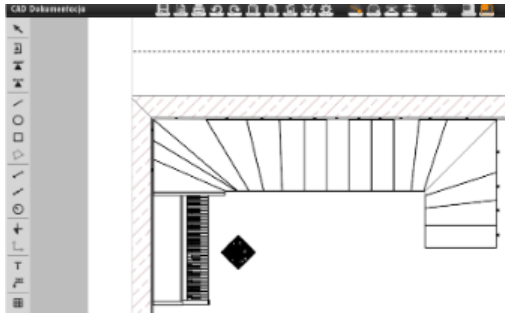



Illustration 62 Stairs - standard outline and simplified outline

4.3.List of "Objects"

Depending on the selected page, various thematically grouped objects appear in this list, such as: texts, images, tables, shapes, walls, doors, windows, bevels, freeform elements (platforms), additions, built-in cabinets, sectional planes (i.e. planes created by cutting a horizontal plane at a fixed height of walls and other objects, hatched by default), cabinets, appliances, floors, tiles, markers, worktops and others (i.e. a world side indicator, a legend of tiles and colors, an inventory of the floor area with the specified area).

Groups of objects can be quickly hidden or shown - using the eye icon  (Illustration 63). The illustration below shows a room with visible "add-ons" i.e. 3D objects, then with all objects of this type marked (by clicking on their position in the list), and with hidden add-ons (Illustration 64).

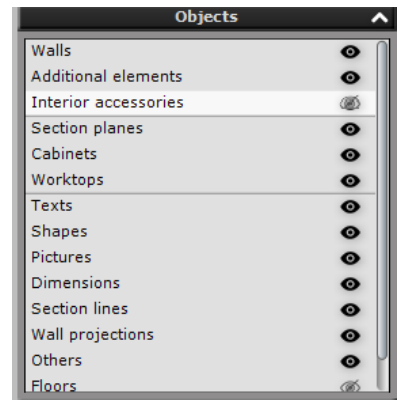


Illustration 64 "Objects" panel - hidden Interior accessories

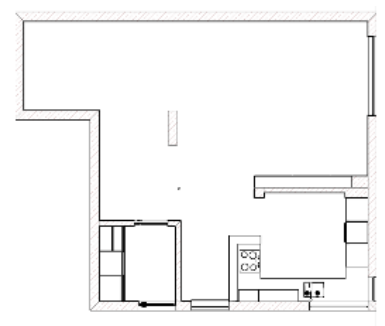
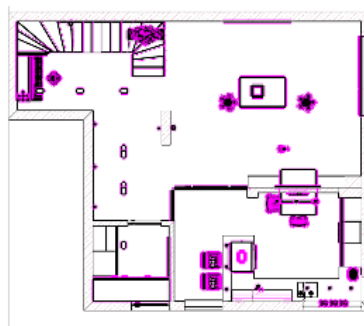
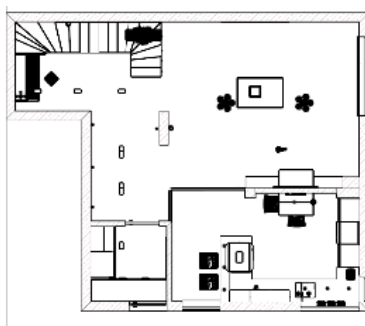


Illustration 65 Visible additions, marked additions, hidden additions

4.4.List „Pages”

This panel contains a list of pages included in the documentation, generated based on the selected documentation template. To modify the number and type of documentation items, you can use the functions, shown in the table below. Documentation pages can also be exported as DWG files.

Options available in the "Pages" panel:	
Add a new page	<p>After selecting this option, a window of the same name will appear, where you can indicate the type of page to be added. At this point, you can change the name of the page to be added - by typing it in the "Change page name" field. Then confirm the selection with the "Ok" button.</p> <p>For the pages "Technical drawing" and "Worktops" additional options are available (Illustration 65 and Illustration 66). For the "Technical Drawing" (Illustration 65) page, you can automatically generate layouts of all walls, convert windows and doors into symbols, and display objects with or without textures.</p> <p>For the "Worktops" page (Illustration 66), you can set the offset of the dimension line, add pages showing dimensioned projections of each worktop separately (option "Worktops projections"), and decide on the transparency of worktops in the projection so that worktops placed lower and obscured by others are visible (option "Show all").</p>
Copy Page	<p>You can copy selected pages of documentation - except for the table of contents. For this purpose, select the selected page with a left-click and select the "Copy Page" icon. The copied page will be added to the bottom of the list. If the copied page has sub-pages (e.g., for the "Worktops" page, single worktop projections have been added), these will also be copied. <u>On the other hand, it is not possible to copy individual sub-pages, which means that you cannot create copies of sections, quads and individual worktop projections.</u></p>
Delete page	<p>To delete an unneeded page, select it with a left-click and choose the "Delete Page" icon, then confirm the operation. After deleting the page, the list will be updated.</p>
Export to DWG	<p>To save a given page as a DWG file, select it with a left-click and choose "Export..." from the top menu. Next, indicate where the file is saved and its name. A file saved in this way can be opened in CAD Decor PRO for further editing of the drawing.</p>
Swipe up/Swipe down	<p>Moves the page up or down in the list of pages.</p>
Group/Ungroup	<p>Creates a group in the list of pages. To create a group, select the item in the list that you want to be in the group, then select the 'Group' icon and give it a name. To select more than one item, select the first item and then select the other items with the [Ctrl] key held down. The list updates automatically when a group is created or deleted. To delete a group, select it in the list and then select the 'Ungroup' icon.</p>

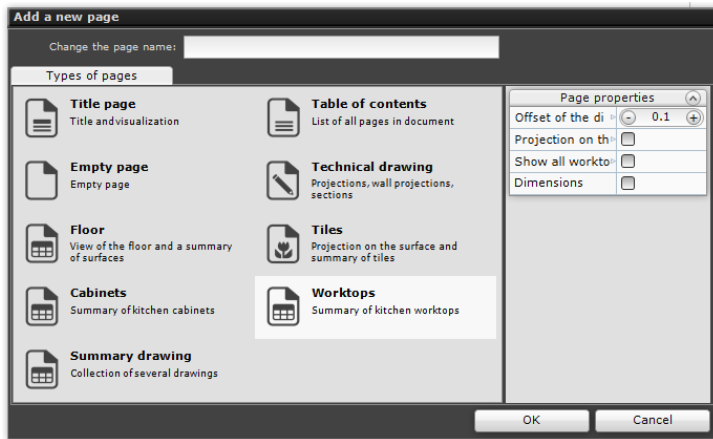


Illustration 66 Adding documentation page - options for worktops

Pages in the list can be moved freely using drag-and-drop.

Any such change will be reflected in the table of contents. Page names can be changed when adding the next page or by double-clicking with the left mouse button on the selected item in the page list, which will edit the name (Illustration 68).

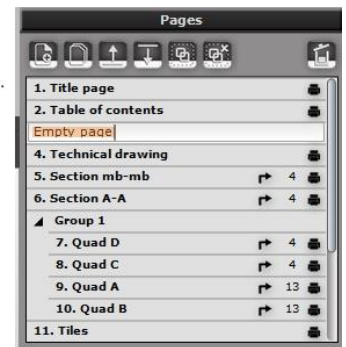



Illustration 67 Edit page name "Empty page"

5. Bottom menu

The bottom menu contains two tabs with previews: "Hatches" and "Symbols". The bottom menu can be hidden or expanded using the arrow .

The "Hatches" tab contains fill suggestions for walls and freeform shapes drawn by the user. To fill an object with a hatch, drag and drop the selected hatch pattern onto the object's area (if the "Object Properties" panel has the "Hatch" or "Solid Color" option selected) (Illustration 69) or onto its edge (if the "None" option is selected). The hatching can be given any shade in the "Object Properties" panel - click on the color preview in the "Filling Color" field, and then in the newly opened

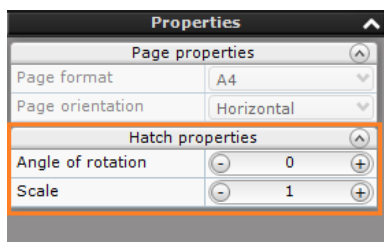


Illustration 70 Hatch properties panel appears when you drag a pattern onto an object

"Color Selection" window, point to the appropriate point on the palette or type

RGB values from the keyboard, confirming them with the [Enter] key. Immediately after applying the hatch, a new panel "Hatch Properties" appears in the right menu (Illustration 70) - where you can change the rotation angle and scale of the pattern. The settings are also remembered after restarting the module.

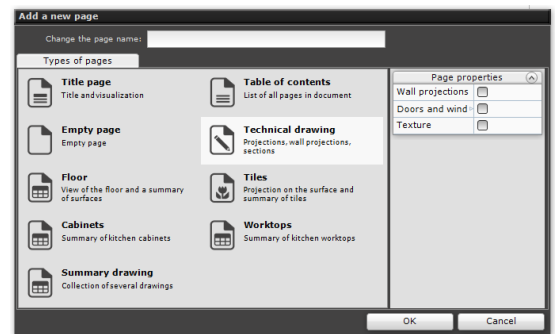


Illustration 68 Adding documentation page - options for technical drawing

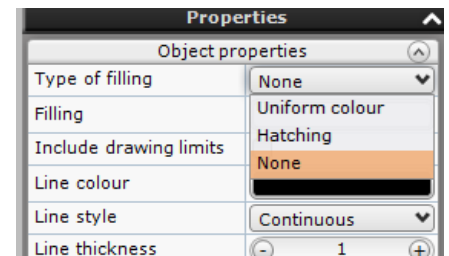


Illustration 69 Hatching" option in the "Object Properties" panel, which appears when an item is selected

The "Symbols" tab is divided into groups: electrical, construction, door and window symbols.

To insert a symbol, simply drag it to the desired location in the project. As you drag, the program indicates the position of the symbol relative to the walls (dimensions appear in four planes: top, bottom, right and left, which can be edited by clicking to enter an offset value from the keyboard) (Illustration 72). After insertion, the symbol can be moved and rotated using the crosshair and bent arrow, which appear when you click on the symbol with the left mouse button (Illustration 71). Symbols can also be inserted using the function of replacing objects with symbols, which is available when objects are subjected to editing in the right menu (the "Replace with symbol" option in the "Object Properties" panel).

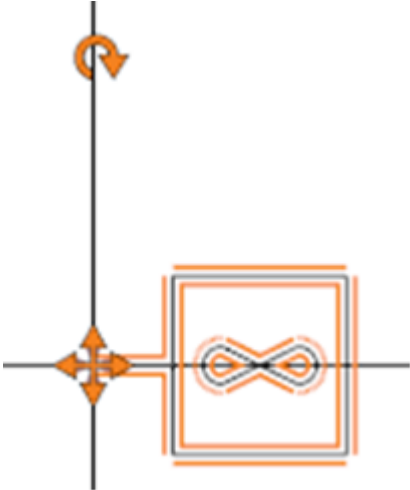


Illustration 71 Symbol rotation and movement markers

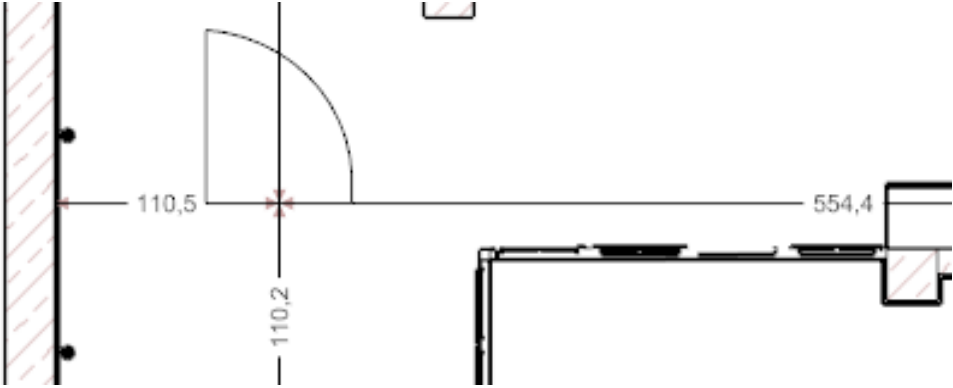


Illustration 72 Dimensions visible when inserting the door symbol

Page types and their properties


The following subsections describe the features and options available for each page of the documentation.

1. Title page

1.1. Page description

This page contains three sections, the contents of which can be edited by double-clicking with the left mouse button:

- documentation title (Illustration 73);
- central field, where you can place an image in JPG, PNG and BMP format (such as a visualization of the project), indicating its location,
- footer, which displays the logo, selected during the initial configuration of the project.

Each of these items can be removed by selecting it with a single left-click and selecting the "Delete" icon from the top menu or the [Del] button on the keyboard. Their visibility can also be turned on or off in the list of "Objects" in center of the right menu by clicking on the eye symbol  next to the corresponding item (Illustration 74).

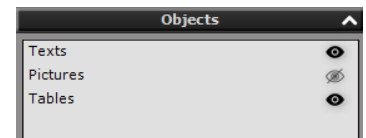


Illustration 73 List of objects on the front page - hidden images.

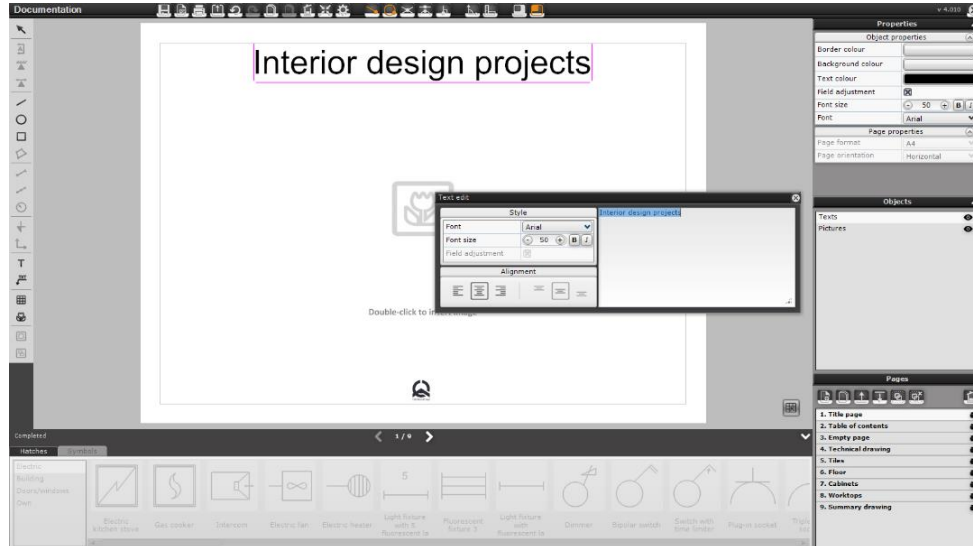


Illustration 74 Tile page- editing title

1.2. Left menu options and table management

In addition, using the options available in the left menu, you can add on the title page:

- custom shapes (polyline, rectangle or circle);
- text;
- reference;
- additional images;

- your own table (you can also insert a default table using the **"Show Table"** button in the right bottom corner of the page preview - Illustration 75).

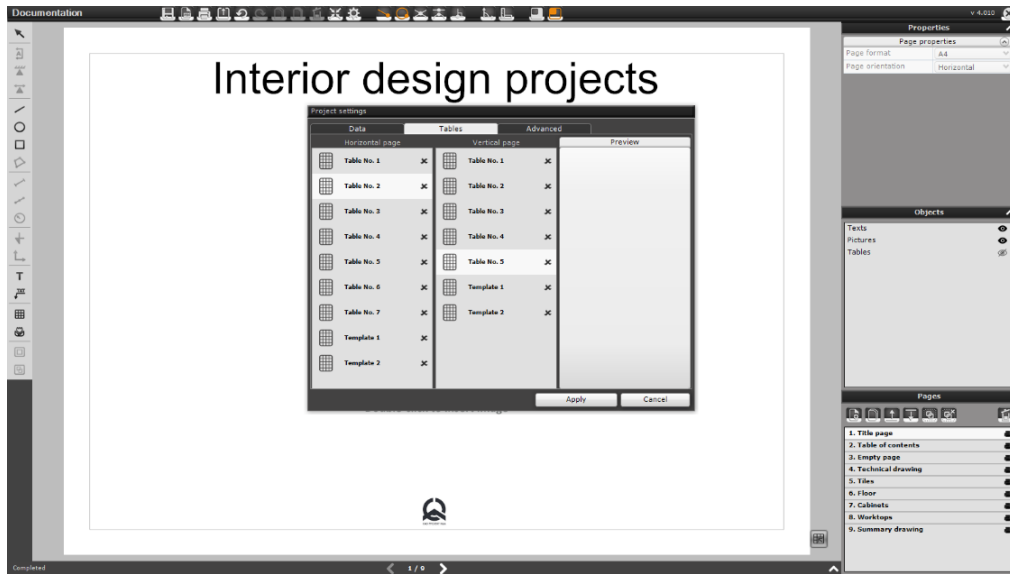


Illustration 75 Changing the table template for pages with vertical orientation

Note that after inserting a table, the "Show Table" button changes to "Hide Table", which allows you to quickly hide the table if the user finds that it does not suit them on this page.

To change the appearance of the default table, select the **"Settings"** icon, then in the **"Project Settings"** window, go to the **"Tables"** tab and select a different table (Illustration 75). This change will apply to all pages with the same orientation throughout the documentation. You can also manually modify the shape, size and content of the table - as described in section [3.9 Inserting and editing tables](#)). Moving the table is done with a crosshair activated by clicking on it. You can also change its position and font properties in the **"Object Properties"** panel in the upper right corner.

1.3.Right menu options

In the right part of the documentation window are available:

- page properties,
- object properties (this panel appears when an object is inserted and selected);
- list of objects;
- pages list.




The menu for page properties in the upper right corner of the window becomes active when you enter **"Card editing mode"**, which is available under the icon  in the top toolbar (Illustration 76). You can then change the format (A0, A1, A2, A3, A4, A5) and orientation of the page (horizontal or vertical). To return to editing items on the page, select the **"Scene editing mode"** icon .



Illustration 76 Options available in card editing mode - active icon visible

In the object list, you can select texts or images in the project and hide them using the eye icon . The page list, on the other hand, is used to switch to other pages and change their order, as well as to add new pages, copy or delete existing ones, or save pages as DWG files.

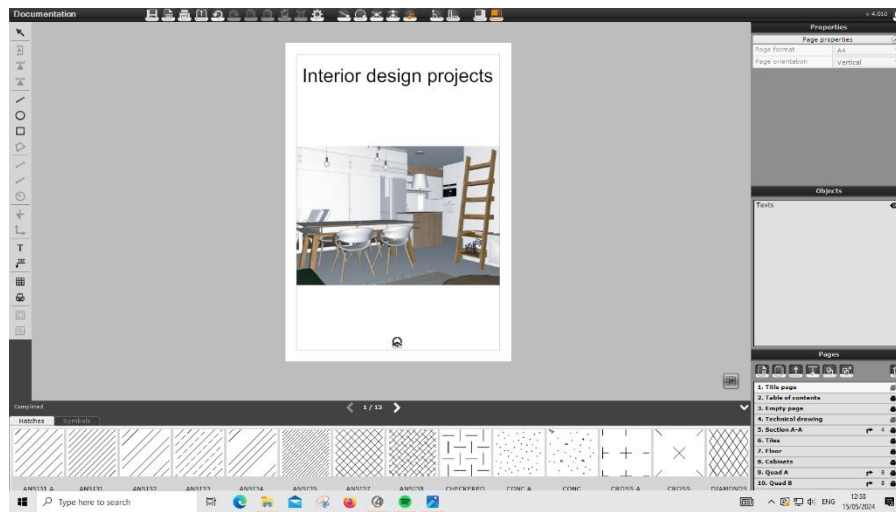


Illustration 77 Sample of cover page

2. Tables of contents

2.1. Page description

The content of the **"Table of Contents"** page is created automatically when the documentation is generated. This applies both to the pages selected during initial setup and to any subsequent content changes made while working with the documentation (using the **"Add New Page"**, **"Copy Page"** or **"Delete Page"** options near the **"Pages"** list in the lower right corner). If the list turns out to be too long to fit on one page, the program will automatically create next pages for the index.

To be able to change the format and orientation of the page, select the **"Card edit mode"** icon from the top menu.

Please note that the order of the pages is subject to change. Any change in order will be reflected in the table of contents. To do this, use the icons  in the page session.

2.2. Left menu options and table management

You can add shapes, text, links, images and custom tables. On the other hand, in the lower right corner of the page preview there is a **"Show Table"** button giving you the possibility to insert a default table, previously selected during the initial documentation setup in the **"New Document"** window.

After inserting a table, the button will change its name to **"Hide Table"**, allowing you to quickly undo the operation. To select a different table template, go to the **"Settings"** icon and in the **"Project Settings"** window, in the **"Tables"** tab, indicate the appropriate template. The change will be implemented for all pages with the same orientation throughout the documentation.

2.3. Right menu options

A single click on the table of contents header activates the "**Object Properties**" menu in the upper right corner (Illustration 78), in which you can change the background, border and text colors, font type and parameters, and select the "**Field adjustment**" option, which automatically adjusts the shape of the text field to the size and number of lines of text you enter. On the other hand, double-clicking opens the text editor, where you can change the content of the header.

In the "**Page properties**" panel, you can modify the position of the index (right or left side of the page), as well as the size (from 1 to 50) and font type of the items below the header. The available options from the left menu are: adding shapes, texts, links, tables (whose shape and size are set in the table wizard) and images. In the "**Objects**" tab, you can control the visibility of these items.

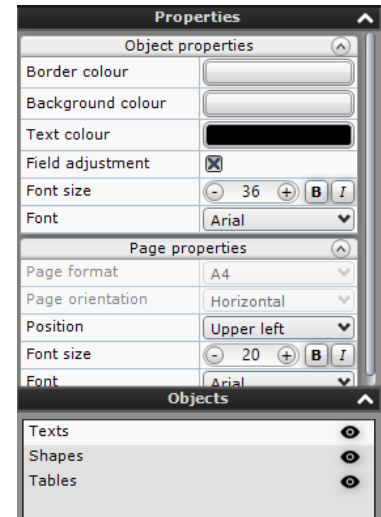


Illustration 78 Object properties (table of contents header options) and page properties (table of contents)

3. Blank page

This is an additional page where you can draw shapes, type text, create your own tables (or insert default ones) or insert graphic files. The options available in the right menu will depend on the objects placed on it.

4. Page "Technical drawing"

4.1. Page description

This is a representation of a section of a room with a horizontal plane, drawn at a default height of one meter above the floor (all objects below or at the level of the incisal plane of the section are visible), a projection that allows you to create detailed technical documentation of the project.

Around the projection with a dotted line is marked a rectangular working area, the extent of which determines the visibility of the drawing (it can be freely changed) (Illustration 79).

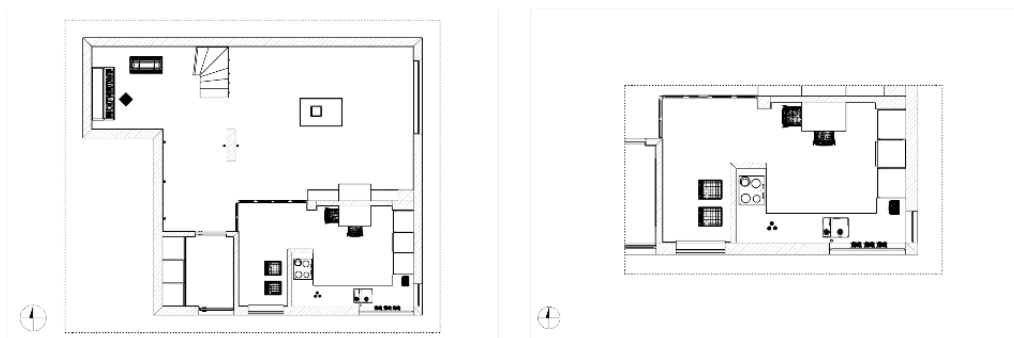


Illustration 79 Different work areas

4.2. Section plane

The user can freely change the height of the incisal plane of the section in the "**Page properties**" panel in the right menu by setting the desired value in the "**Section height**" field.

You can also show the important elements of the design above the incisal plane:

- collectively by selecting the **"Objects"** category **"Additional elements"** in the list, and then selecting option **"Do not trim with section plane"** in the **"Page properties"** panel;
- for the selected element by selecting the object in the design and choosing the **"Do not trim the section plane"** option.

4.3. Left menu options

In the left menu, active icons allow you to:

- adding any vertical sections;
- generation of wall projections or based on two indicated points;
- drawing your own shapes (polylines, rectangles, circles);
- project dimensioning;
- insertion of level marking (tiled area or object);
- adding texts and references;
- drawing any table (as with the other pages, you can also insert a default table using the **"Show Table"** button);
- insertion of images.

4.4. Bottom menu options

The bottom menu contains two lists: **"Hatches"** and **"Symbols"**. The use of these options is described in detail in section [5. bottom menu](#). The selected type of hatching or symbol is simply dragged to the right place in the project. In the case of hatching, point the area with the mouse cursor to the object to be applied. This is described in detail below in section [4.6 Filling and coloring objects](#).

4.5. Operations on objects

When you point the mouse cursor at any object in the drawing, it becomes highlighted, and when you click on it with the left mouse button (i.e., subject it to editing), the options available in the **"Object Properties"** panel in the upper right corner of the module window will become available. An object selected in this way can also be deleted, for example, to improve the visibility of the drawing. Other available operations vary depending on the type of object (they are described in the following subsections).

4.6. Filling and colouring objects

For some objects (sectional surfaces, elements generated using the **"Free-formed elements"** option in the .4CAD environment or freeform shapes added by the user), you can select one of the options in the upper right corner: **"Uniform color"**, **"Hatching"** or **"None"** (Illustration 80). When the **"Hatching"** option is selected, the object will be filled with the default hatching. Applying and changing the hatching are possible for each of the above options. For hatching and solid color, just drag the selected pattern from the list at the bottom of the screen onto the object area. On the other hand, if there is no filling, indicate the edge of the object when dragging the selected hatch pattern.

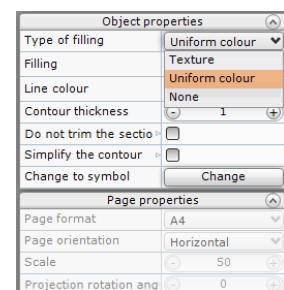


Illustration 80 Choice of filling type

You can freely change the color of the fill by indicating the shade in the **"Filling Color"** panel - both for the **"Uniform color"** and **"Hatching"** options. Left-click on the color preview box and, in the newly opened

"Choose color"(Illustration 81) window, indicate the shade by left-clicking on the palette or by typing RGB values from the keyboard. Validate the values by selecting the [Enter] button or moving to another field.

The parameter **A** determines the degree of transparency - it reaches 100% when the parameter is equal to 0.

Objects such as fixtures (additional element) kitchen cabinets, worktops, can have visible textures instead of hatching. When editing such objects, in the "Object Properties" panel, instead of the "Hatching" option, the "Texture" item will be available. The "Uniform color " and "None" items remain unchanged. For all of the above-mentioned objects, you can also change the color of the outline lines. On the other hand, areas and objects covered with tiles or paint can be depicted using the manufacturer's actual patterns or default colors.

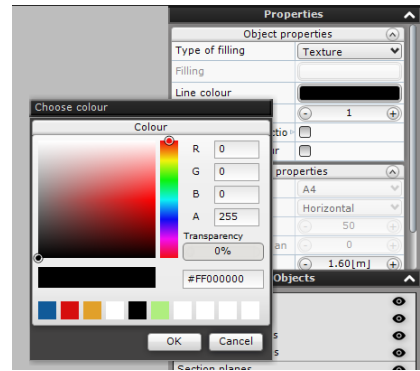


Illustration 81 Choice of filling color

Such a view is available on the "Tiles" and "Technical drawing" pages, as well as on layouts created on them (on the "Technical drawing" page, select the "Texture option. → Display" in the right menu; if this function is not selected, tile and paint textures will not be shown on the layouts created). On other documentation pages, these areas are displayed without fill. In addition, such areas can be displayed with or without a visible grid (outline of individual tiles) (Illustration 82).

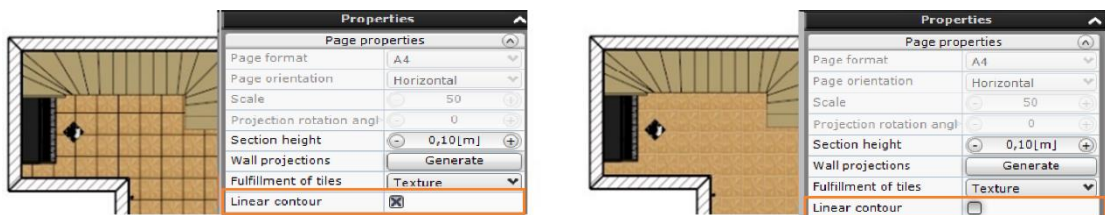


Illustration 82 Linear outline of the tile projection and the same projection without the outline

4.7. Control of the appearance of objects

For objects such as walls, doors and windows, free-formed elements (landings) and accessories, you can change the fill and colour of the lines::

- the thickness of their outlines (option: "Contour thickness");
- whether they are intersected by the plane of the section (option: "Do not trim the section plane");
- the complexity of the outlines (option: "Simplify the contour" (Illustration 83).

The different settings of the above options are shown below (Illustration 84).

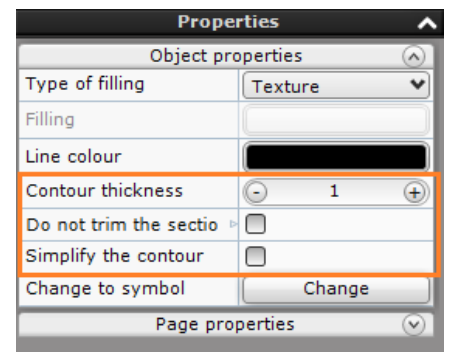


Illustration 83 Options for changing the appearance of objects

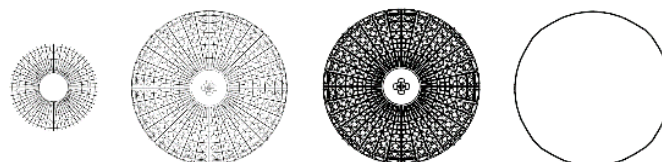


Illustration 84 Ceiling lamp - from left: partially trimmed cross-sectional plane, in full, with bold contour, with simplified contour

4.8. Converting objects into symbols

After left-clicking on the object to be replaced with a symbol, the "Object Properties" panel in the upper right corner of the technical documentation window shows the "Change to symbol" option (Illustration 85).

When you click the "Change" button, the "Edit symbols" window opens, where you indicate which symbol you want to use. The symbols can then be edited and rotated, scaled or changed in color (Illustration 85).

A legend is automatically created for the inserted symbols (Illustration 86). Its position can be changed using the options in the "Object Properties" panel (choices include the top right and left corners and the position of "Any" - that is, set manually by the user)(Illustration 87). On the other hand, to change the descriptions in the symbol legend, double-click on the symbol name with the left mouse button and modify the description or font parameters in the text editor (Illustration 88).

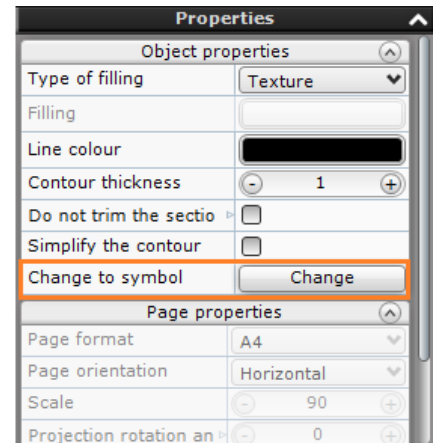


Illustration 85 Object properties - option "Change to symbol"

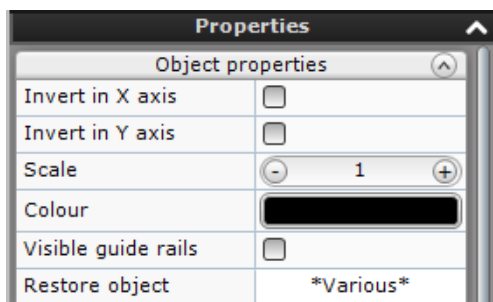


Illustration 87 Options for editing symbols

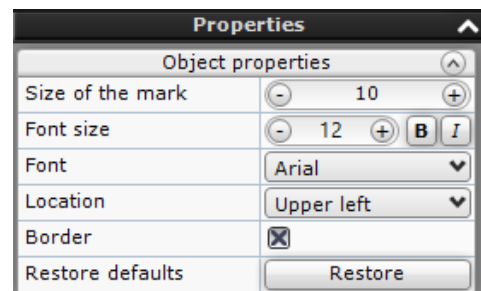


Illustration 86 Options for editing the symbol legend

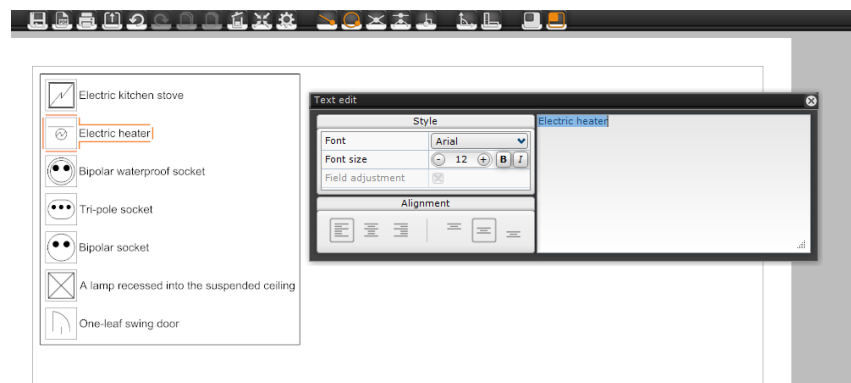


Illustration 88 Editing the text of the symbol description in the symbol legend

4.9. Dimension application and editing

There are three tools at the user's disposal: "Dimension Line", "Quick Dimension Line" and "Dimensioning of arches". Once the dimensions are applied, they can be edited: added or deleted (in whole or individual parts), merged and split, modified their descriptions, changed line and text colors and tag types, controlled the visibility of auxiliary lines, and moved and modified dimension lines manually. Dimensioning is described in detail in [Dimensioning tools](#).

4.10. Generation of projections and sections

On the "Technical drawing" page, the user has the option to automatically generate projections of all walls, as well as to manually create it (of walls and based on two indicated points) and vertical sections of the room. All generated layouts and sections will be added to the list of pages. Clicking on an item in the list (e.g. "Quad AA") opens this page. In its lower right corner, you will see a thumbnail of the "Technical drawing" page

with the wall or location where the layout was generated highlighted (Illustration 89). Projections and cross sections can be applied:

- custom shapes, dimensions, text and references, level markers, tables and images (using options from the left menu);
- hatchings and symbols (from the lists at the bottom of the window);
- default table (using the **"Show Table"** button in the lower right corner of the preview window).

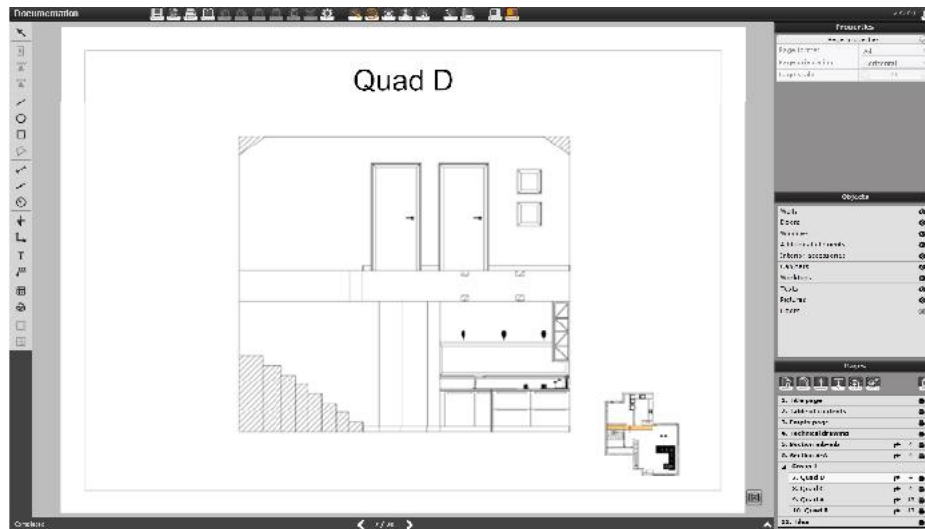


Illustration 89 Examples of a layout with a visible thumbnail of the technical drawing in the lower right corner

Note: Deleting the 'Technical Drawing' page will delete all the pages created from this page.


5. Page "Tiles"

5.1. Pages description

This page looks similar to the technical drawing - with the difference that it shows all the materials used in the project, while the other objects are hidden (in addition, the drawing area is also absent, but you can see the outline of the default floor, generated in the .4CAD environment - if it has not been removed). The materials displayed are:

- ceramic tiles and other coverings;
- paints and other manufacturers' materials;
- standard textures and user's own materials.

5.2. Page layout control

As with the **"Technical drawing"** page, the user can freely change the section height, or the level at which the horizontal incisal plane runs in the design, determining the visibility of individual objects (those below or at the level of the section plane will be visible). You can also choose how to display materials - either using textures or default colors, with linear outlines (technical lines, resulting from the division of the texture into surfaces, which in the case of ceramic tiles coincides with the grout grid) or not (Illustration 90). Active outlines allow you to measure projections. You can also display more objects by clicking on the icons with a crossed eye  next to their position in the **"Objects"** list. When you hover the mouse over a texture plane, you can delete it (you can return to the previous view using the **"Undo"** icon in the top menu or using the keyboard shortcut [Ctrl + Z]).

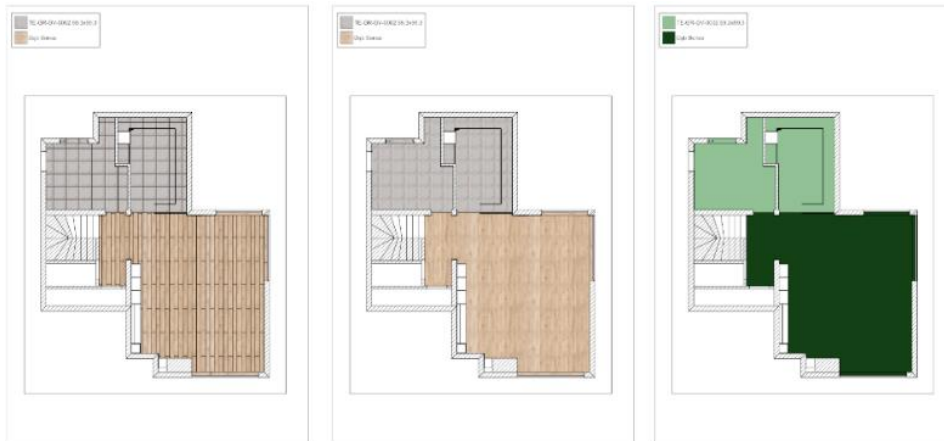


Illustration 90 Various representations of the floor plan of the room from above with tiles

All materials visible in a given view are included in the legend, which by default appears in the top left-hand corner. You can customize its appearance - change its position and size. To move the legend, left-click on it and drag its position, or select the **'Upper right'** option in the **'Object properties'** panel to move it to the top right corner. The size of the legend can be changed by controlling the font size and preview..

The font size can be changed in the right menu after selecting the legend or in the text editor, opened by double-clicking on any caption in the legend (the content of the edited entry can be changed here). The font changes simultaneously for all entries. To change the size of the previews, click once on the legend and then set the desired value in the **"Size of the marker"** field in the **"Object Properties"** panel. The change will happen simultaneously for all previews. Changes made in the top view are reflected on manually created layouts and sections.

5.3.Left menu option

For the **"Tiles"** page, all the functions of the left menu are available except for adding new surfaces on the floor. User can therefore:

- generate vertical sections and wall layouts and from two points;
- draw their own shapes (lines, circles, rectangles);
- enter dimensions;
- insert level and starting point markings of the tiled area;
- add text and links, any tables and images.

You can also insert a default table using the **"Show Table"** button in the bottom-right corner of the page preview. the right menu provides the already mentioned options for changing the section height, the type of tile fill, and the display of the line outline - in the **"Page properties"** panel, as well as controlling the visibility of individual drawing elements - in the **"Objects"** list. At the bottom of the screen are lists of symbols and hatches that can be applied to the drawing.

6. Page "Floor"

6.1. Page description

The "Floor" page shows a projection of the room without furnishings along with a legend containing the dimensions of the floor area in square meters. Visible are walls, doors and windows, sectional planes and free-formed elements (platform). Any area on the floor that is recognized as separate in the visualization (e.g., has been covered with a different material or separately drawn) will be shown as a separate area in the documentation. The outline of the default floor, generated in the .4CAD environment (if not deleted), is shown around the room.

6.2. Page layout control

If you want to see more details on the page, simply reveal the selected items in the "Objects" list on the right side of the screen. To hide the numbering of surface number tags, you can use the eye icon in the "Objects" list in the right part of the window (all of them will be hidden) or left-click on the surface whose tag you want to disappear, then expand the context menu under the right mouse button and select the "Hide/Show Numbering" function from it. The markers can also be moved using the crosshair that appears in the center of the marker when left-clicking on it. It is possible to change the position and size of the legend - using the options available in the "Object Properties" panel after left-clicking on the legend, or using the text editor, after double-clicking with the left mouse button on the selected item, analogous to the editing of the tile legend described in the previous section.

In addition, using the icons in the left menu you can:

- draw your own shapes (e.g. auxiliary lines to properly draw additional surfaces);
- add dimensions;
- insert level marker;
- add texts and references;
- insert table or image.

The "Show Table" button in the lower right corner of the page preview allows you to add a default table (the appearance of which the user determined at the initial documentation setup stage). It can be changed in the "Tables" tab in the "Project Settings" window, which opens when you select the "Settings" icon from the top menu (Note: the change will affect all pages with the same orientation throughout the project).

6.3. Redesign and addition of new floor surfaces

The user can change the shapes of individual floor areas and add new surfaces. Shape changes can include modifying the position and number of vertices, changing the shape of a side (e.g., from a line to an arc), and cutting holes in surfaces. These operations are described in the following subsections.

6.3.1. Changing the position of vertices and adding arcs

To modify the shape of the surface in terms of the position of the vertices, left-click anywhere on the surface to be modified and correct the shape using the orange markers that will then appear: the anchor points at the corners of the surface and the arc markers in the middle of each side of the area (Illustration 91). To move a marker, click on it with the left mouse button and move the mouse in the desired direction. When the desired

shape is reached, release the mouse button. During manual modification, the current value of the area to be modified is displayed.

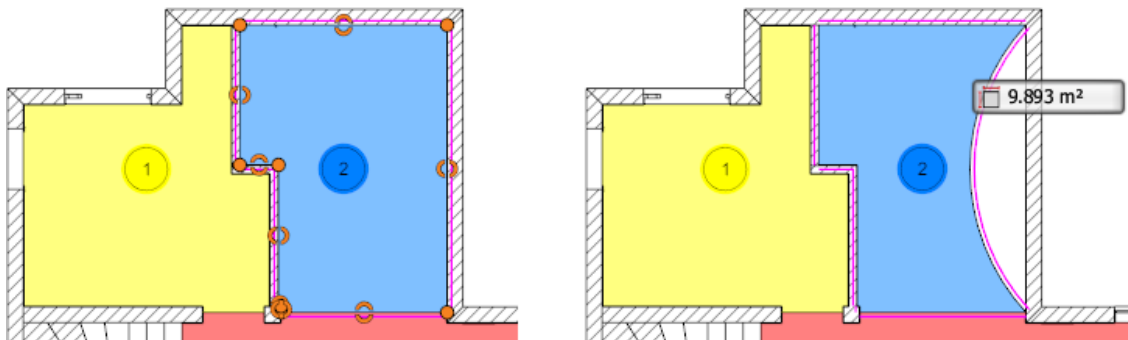


Illustration 91 Visible corner and arc tags (left) and the effect of using the arc tag (right)

6.3.2. Change number of vertices - drop down menu options

The number of vertices can be changed using the **"Add vertex"** and **"Delete vertex"** options, available in the context menu under the right mouse button (Illustration 92).

To do this, first right-click on the selected area, then expand the right-click pop-up menu and select the desired function from it. After selecting the function and pointing the cursor to the corner or arc (half side) marker, the indicated point is highlighted in pink (Illustration 93), which makes it easier to select the correct place to add or remove a vertex.

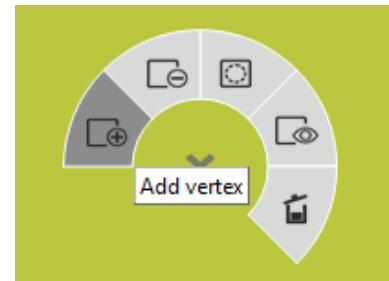


Illustration 92 Pop-up menu for floor space

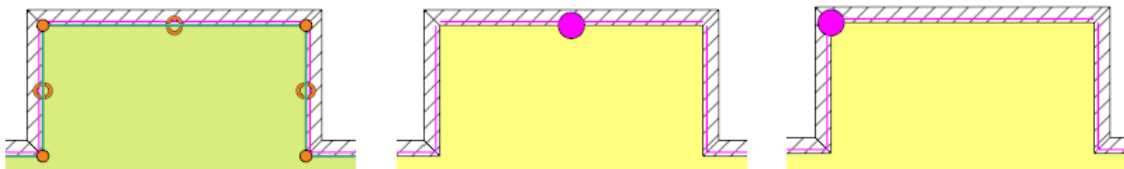


Illustration 93 From left: view of markers when clicking on an area with LPM, corner marker when deleting a corner, segment center marker when adding a corner

Note: Once 'Add Vertex' has been selected, any number of new vertices can be added by successive left clicks. To complete the operation, right-click anywhere. The 'Delete vertex' option deletes a single vertex. Once selected, left click on the vertex to be deleted. This completes the operation. To delete more vertices, select 'Delete vertex' from the pop-up menu again.

6.3.3. Adding new surfaces

Drawing new surfaces can be useful, for example, for users who do not have the **Tile Editor Module** to easily depict areas of the floor to be covered with different claddings, as well as for any designers who will be making ad hoc changes when talking with a client. It can also be used for the representation of underfloor heating. To add a new surface, select the **"Insert the surface"** icon in the left menu. It allows you to draw a surface based on the attractor points available in the top menu. The new item will be added to the legend, and the area of the newly drawn area will be added to the aggregate floor area calculated by the program. After the area is drawn, the shape of the area can be modified, for example, to obtain rounded shapes.

6.3.4. Cutting holes in surfaces

Because the area of the newly drawn area is added to the total area of the floor in the project, in most cases, to maintain the correct values of the total area, a hole of the same shape should be cut out before drawing the new area. To do this, indicate the area where the hole is to be cut with a left-click, then expand the context menu under the right mouse button and select the **"Cut out the hole inside the area"** option from it (Illustration 94).

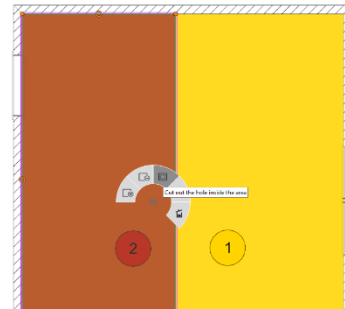


Illustration 94 Function of cutting holes in floor surfaces in the context menu

Then point to the next vertices of the hole with left-clicking. To finish drawing, click the right mouse button. You can change the shape of the hole after drawing it, such as adding arcs. Then you can draw a new surface with a shape identical to the shape of the opening, as described above. This will ensure that the total area of the floor in the project reflects the actual condition.

7. Page "Cabinets"

7.1. Description

The page **"Cabinets"** is a technical drawing with added tags with the numbering of kitchen cabinets and with a table containing the data of the cabinets in the lower left corner of the page.

7.2. Cabinet data table options

The first time you point the mouse cursor at the table, it will highlight the table in full green, and at the same time all the cabinet and cupboard markers in the drawing will be highlighted. The first time you point the mouse cursor at the table, it will highlight the table in full green, and at the same time all the cabinet and cupboard markers in the drawing will be highlighted (Illustration 95). When you left-click anywhere in the table and point the cursor at any of the items in the table, only the indicated item and cabinet in the design will be highlighted, along with the corresponding marker (Illustration 98).

Similarly, hovering the cursor over a cabinet or marker in a drawing highlights the corresponding item in the table. When you left-click on a table, the **"Object Properties"** menu in the right-hand menu also becomes available.

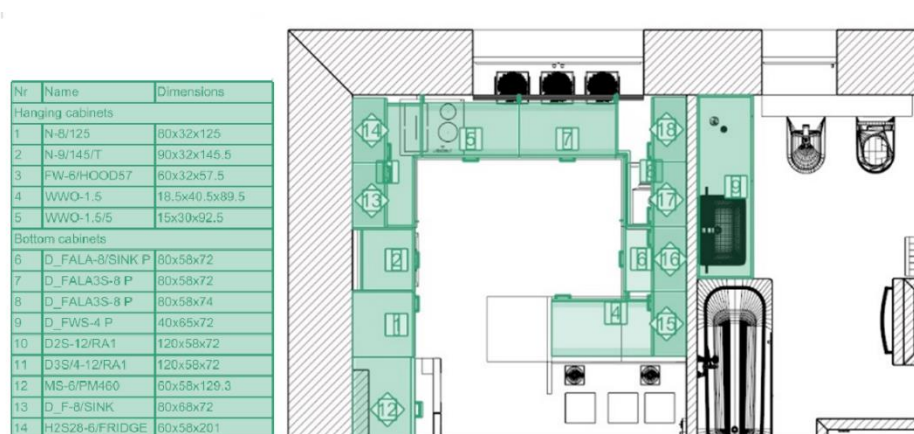


Illustration 95 On the view of the table indicated by the cursor before clicking on it with the left mouse button

7.2.1. Adding and deleting columns and rows

In the "Object Properties" panel, the user can add or remove columns by checking or unchecking options, corresponding to columns containing: cabinet names, their dimensions, insertion level, type, presence of hinges or additional notes. The columns next to which the , will be present in the table.

To add a single row to the table, click anywhere with the left mouse button, then expand the pop-up menu under the right mouse button and select "Insert cell" from it (Illustration 96). To remove the selected item from the table, click on it with the left mouse button and select "Delete cell" from the context menu. At the same time as the item in the table, the tag of the deleted cabinet will disappear from the page.

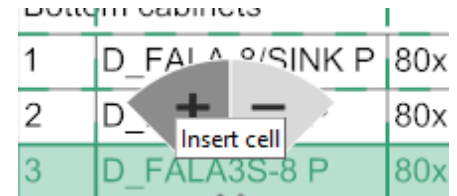


Illustration 96 Pop-up menu in the cabinet data table

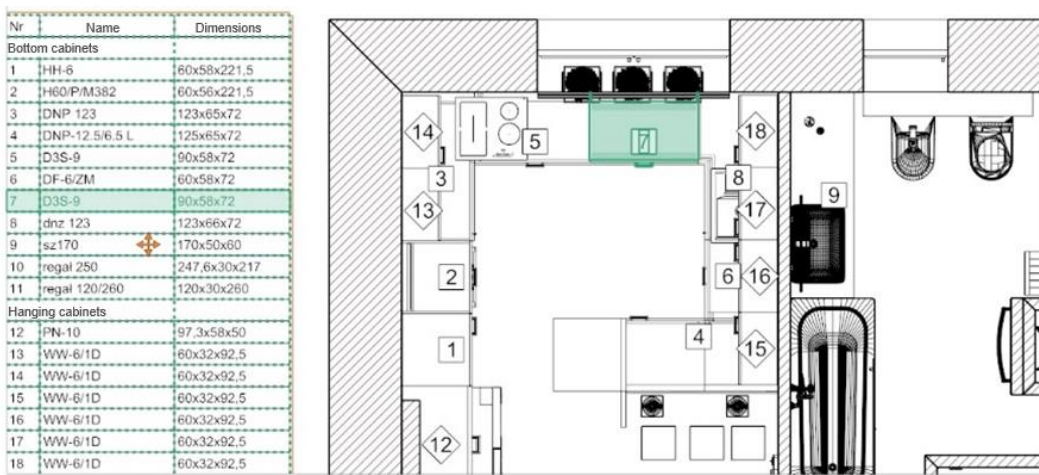


Illustration 97 View of the table and cabinet after clicking on the table with the left mouse button

7.3. Adding and deleting groups

You can also add your own groups of cabinets. To do this, click the "Add" button in field "Add group" (Illustration 97). Two new rows will appear in the table - the header "Added" and an empty item, bearing the next number.

To enter the name of the header, double-click with the left mouse button on the item "Added", enter the name of the group in the text-editing window and close the window with a cross . You can then move the selected items to a new group.

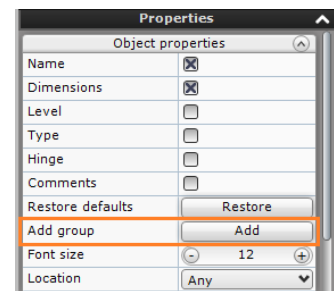


Illustration 98 Functions of editing the table with the data of cabinets

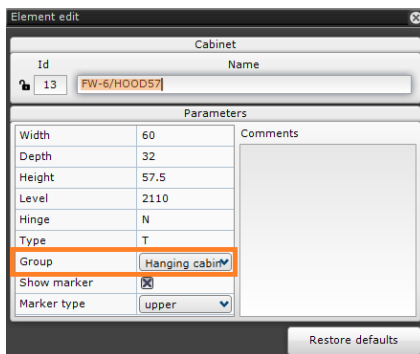


Illustration 99 Cabinet editing window

To do so, edit each of them in turn by double-clicking with the left mouse button and then selecting the appropriate group from the drop-down list in the "Edit Item" window (Illustration 99). The cabinet is assigned to the indicated group. You can immediately edit another item by double-clicking on it with the left mouse button.

Note: The 'Restore Default' function in the 'Edit Item' window restores the original settings of the cabinet being edited. On the other hand, the 'Restore' button in the 'Restore Defaults' field of the 'Object Properties' window restores the contents of the entire cabinet data table to the original settings (this undoes all the changes made, including the addition of new groups and the assignment of items to them).

7.4.Changing the size and position of the table

The size of the cabinet data table can be changed in two ways. First, by changing the font size in the **"Object Properties"** panel - the height of the rows will automatically adjust to the font size. You can also modify the shape and size of the table using the mouse by stretching selected cells vertically or horizontally. Changes made in this way are remembered when the font size changes - until the table reaches its maximum size (then the size of the rows is automatically, proportionally adjusted).

The location of the table on the page can be customized individually by selecting one of the default positions for the **"Location"** function in the **"Object Properties"** panel (there are four corners to choose from), or by moving the table to any location using the orange cross, activated by clicking on the table with the left mouse button (then the **"Location"** field will automatically set the **"Any"** option).

7.5.Editing of individual elements of the cabinet table

Each item in the table can be edited by double-clicking on it with the left mouse button. This will open the **"Element edit"** window, where you can:

- change the cabinet number (also visible on its tag in the design);
- give the cabinet a new name;
- enter your own parameters;
- assign the cabinet to another group;
- decide whether the cabinet marker should be visible in the design and what type it should be;
- add comments regarding the cabinet in question.

The padlock next to the cabinet name in the **"Element edit"** window allows you to lock the cabinet number (it locks automatically when the user changes the number). This is useful, for example, when the user has added an extension to a cabinet and wants to treat both items as a single item. In this case, you can give both items the same number and lock it so that the program cannot change it back to the default number. The page will display two tags with the same numbering. To return to the automatic numbering of the cabinets, unlock the padlock with a left-click or select the **"Restore Default"** button in the window **"Element edit"**.

All other changes made in this window are saved until the user restores the default settings (either in the **"Element edit"** window or for the entire table in the **"Object Properties"** panel).

7.6.Other options for the "Cabinets" page

The active icons on the left menu allow you to:

- generation of sections and projections (on which cabinets will be numbered in the same way as on the main drawing, except that only markers for cabinets within the boundaries of the layout or section will be visible),
- drawing your own shapes,
- project dimensioning,
- insertion of level mark,
- adding texts and references,
- inserting table,
- image insertion.

In the lower right corner of the page preview, there is an icon that gives you the option to insert a default table. To change the table template, go to the **"Settings"** icon, select the **"Tables"** tab and indicate the template. Note that this change will affect the entire project (all pages with the same orientation).

8. Page „Worktops“

8.1.Description

This page shows only the worktops (Illustration 100), and after generating dimensioned drawings of individual worktops using the **"Worktop projections"** option, also a table with their data, as described in Section 8.5. This page can be displayed in two ways:

- without worktop transparency enabled: only the worktops that are visible in the current top view are then visible - to show worktops that are lower and obscured by them, you need to change the value in the **"Section height"** panel (it is not possible to show all worktops at the same time);
- with worktop transparency enabled: all worktops are visible, regardless of the level, because the worktops higher up are transparent - to enable worktop transparency, select the **"Show all worktops"** option in the **"Autogeneration"** tab during initial documentation setup.

On the **"Worktops"** page, you can generate DXF files with worktop data for use with CNC machines.

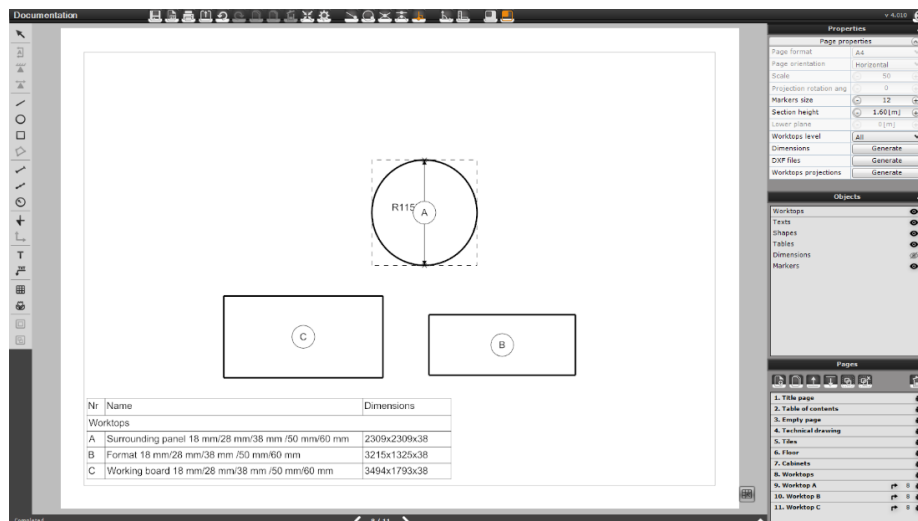


Illustration 101 Page "Worktops"

8.2.Generate projections of individual worktops

In addition to a page with an aggregate representation of Worktops, you can get dimensioned projections for each worktop individually, which are displayed on subpages for the **"Worktops"** page. The projections of individual Worktops can be generated in two places:

During the initial configuration, in the **"Autogeneration"** tab, after clicking on the **"Worktops"** item in the panel on the right menu (Illustration 102);

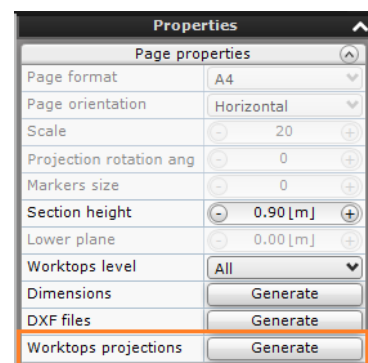


Illustration 102 Worktop projection generation option in the right menu

When working with documentation, when you go to the **"Worktops"** page in the right menu, in the **"Page properties"** panel (Illustration 101).

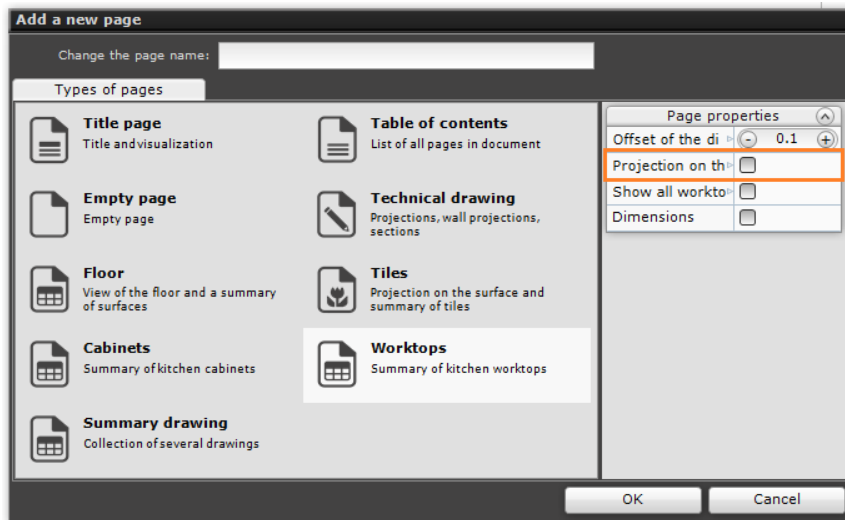


Illustration 103 Option to generate worktop projections in the documentation configuration window

8.3.Options for "Worktops" page and single worktop projections

Drawings of Worktops can be edited. When you click on a worktop with the left mouse button, the right menu activates the **"Object Properties"** panel, where you can:

- change the fill type (options: **"Uniform color"**, **"Texture"** and **"None"**.),
- select a new fill color,
- indicate the new line colour,
- change the thickness of the outline of the marked worktop.

Using the options on the left menu, you can also:

- draw your own shapes (e.g., to add hatching),
- add the dimensions,
- insert level marks,
- adding texts and references,
- inserting table,
- image insertion.

Using the **"Show Table"** button in the lower right corner of the page view, you can also insert a default table with project data.

Note: The appearance of the worktops on the 'Worktops' and 'Technical Illustration' pages is slightly different from the appearance on the sub-pages of the generated individual worktops.

8.4.Determining the thickness of the worktop contours

The thickness of the contour of the Worktops is determined in different places in relation to the Worktops, shown on different pages:

- on the technical drawing and on the **"Worktops"** page - is equal to 1 by default, as is the outline thickness of the other drawing elements; to change it, select the tops for which you want to change it, and set the new value in the **"Contour thickness"** panel on the right side of the window;
- on subpages showing individual Worktops (added to the documentation after selecting **"Worktop projections"** in the right menu on the **"Worktops"** page or during initial setup) - defaults is 3; to change it for all subpages at the same time, select the **"Settings"** icon from the top menu and change the value in the **"Worktop Thickness"** field in the **"Project Settings"** window; the thickness of the worktop can also be set individually for each worktop projection after navigating to a subpage, selecting a worktop and selecting a new value in the right menu, also in the **"Worktop Thickness"** field.

8.5. Worktop data table options

On the **"Worktops"** page, after generating the projections of individual Worktops, a table with their data will appear, which can be edited in a similar way to that described in section 7.2. Cabinet data tables. The first time you point the cursor at the table, it will highlight the table in green in its entirety, and at the same time all the worktop markers and Worktops in the drawing will be highlighted. When you left-click anywhere in the table and point the cursor at any of the positions, only the indicated position and the worktop in the design, and its marker, will be highlighted. When you hover the cursor over a worktop or marker in the drawing, the corresponding position in the table will be highlighted.

When left-clicking on a table with worktop data, the **"Object Properties"** menu in the upper right corner of the screen becomes available (Illustration 103). In it, you can add or remove columns by clicking in the fields **"Name"**, **"Dimensions"**, **"Level"**, **"Type"** and **"Notes"**, in depending on what data you want to include in the table (columns will be present, against which a cross will be placed).

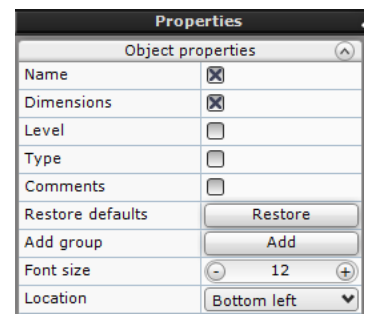


Illustration 104 Properties of the table with worktop data

You can also add a new group (e.g., when sills, shelves or wall panels were created from Worktops) and change the font size and position of the table. here you can also restore the original settings for the entire table (option **"Restore default . → Restore"**).

To add or delete a row, click on the table with the left and then the right mouse button. A small context menu will unfold, where you should select + (plus) (option **"Insert cell"**) or minus (**"Delete cell"**) (Illustration 104).

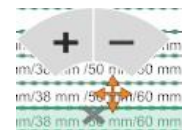


Illustration 105 Adding and deleting rows

Each item in the table can be edited by double-clicking on it with the left mouse button. This opens the **"Element edition"** window, where you can:

- give the tabletop its own designation A, B, C, etc. (after typing a new letter and clicking elsewhere, the name will be automatically locked - the padlock symbol visible next to it will "close" - to return to automatic naming, click on it, which will "open" it");
- rename the worktop;
- correct the dimensions and level of the insertion;
- specify the type of worktop;
- assign it to the appropriate group (previously added to the table);

- decide whether the worktop tag should be displayed in the project and what type of tag it will be;
- enter comments;
- restore the default settings for the item being edited.

To change the size of the table, you can select a different font size in the right menu or use the mouse to stretch the cells vertically or horizontally (these changes are remembered when changing the font size - until the maximum size is reached - then an automatic adjustment will occur). To move the table, click on it with the left mouse button, then select the orange cross and with another left click indicate the new location, or select one of the options available in the "Location" panel in the right menu. The table can be deleted using the [Delete] button or the "Delete" icon from the top menu. To restore it, uncheck the "Hide Table Tops" option in the right menu.

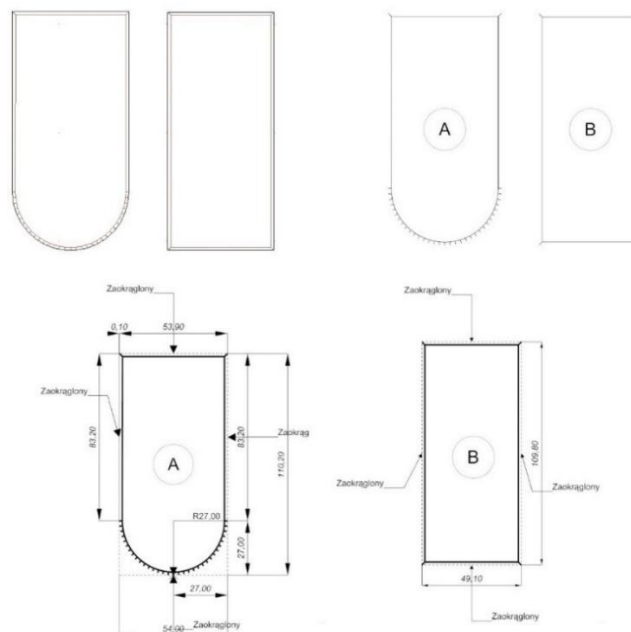


Illustration 106 Views of sample countertops with profiles rounded on both sides, from left: in .4CAD environment, on page "Countertops", on subpages showing countertop projections

9. Page „Summary drawing”

9.1. Description

This page allows you to summarize the documentation you have created. It allows you to display the previously created pages on a single page. It is a way to present the entire project documentation in a compressed manner.

9.2. Page Views

The page view can be added in two ways:

- insert a set of views into the summary drawing - this option is displayed when you first enter the page edit page (Illustration 106) , you can create a table where views will be displayed. In which you can set the number of columns and rows, and the width and height

of the entire layout. At most, you can insert 5 columns and 5 rows, which will give you 25 fields where you can show selected page views or parts of pages.

- add view to the summary drawing – adding single view.

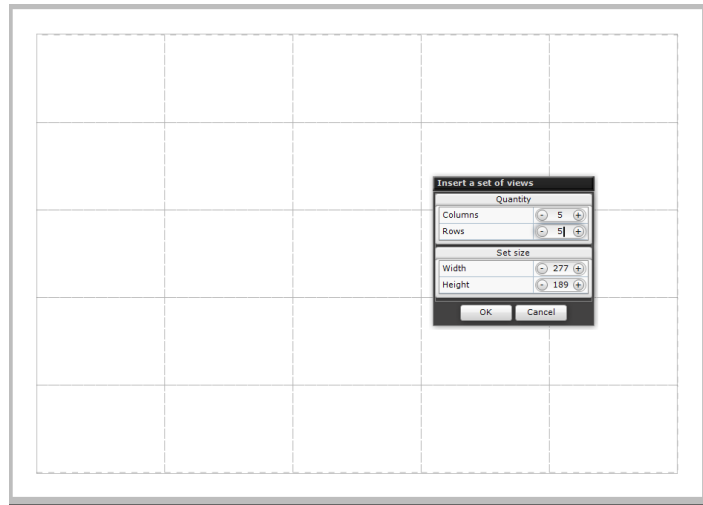


Illustration 107 Page Summary drawing with maximum number of views

Next, you need to insert views of pages or parts of pages in the selected fields. This can be done in two ways: by double-clicking in a given field, or by clicking once and selecting the "Insert page" option in the right menu. A window will open with previews of all pages, present in the documentation (Illustration 107).

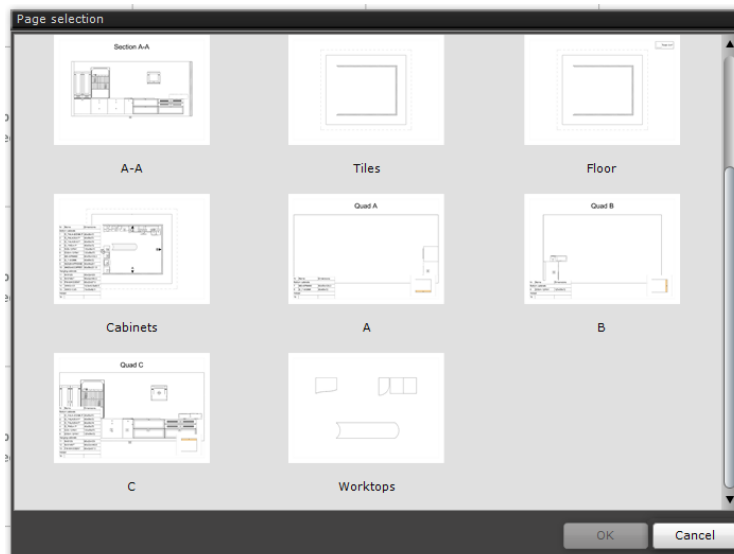


Illustration 108 Page selection window

After selecting the selected item and clicking "Ok", it will be inserted in the edited field. If it will be a page, containing symbols, tiles or floors, along with the page view, the corresponding legends (with properties like those on the base pages) will be added to the summary drawing. If kitchen cabinets or countertops will be present in the added view, tables with their data will also be automatically added. When you add a view that includes other cabinets or countertops, more items will be added to the given table.

After inserting a view, double-clicking on it takes you to the source page, where you can, for example, remove an unnecessary object, change the title or position and size of texts.

Fields intended for presenting page views can be moved freely on the page, as well as rotated and resized and reshaped using the mouse. This is done with orange markers, which appear when you select a field with a left-click. When you click on the crossed arrows in the center of a field, you can change its position by moving the mouse to the desired location and clicking again, confirming the new location. Clicking on the curved arrow that appears on the top edge of the edited field allows you to rotate it around the center point. On the other hand, clicking on the orange point in either corner and moving the mouse will resize the field accordingly. These modifications can be made both in the card editing mode and in the scene editing mode.

Note: If you remove a base page from the page list, its view will automatically disappear from the summary drawing page.

It is possible to insert projections at different scales in the summary drawing. If the user decides to do so and adds to the summary drawing a view from a page that has a different scale than the one inserted so far (while texts will be present on it) a message will appear, recommending setting the same scale on the source drawings, if texts of the same font size are to be of equal size on all views. Such a necessity is due to the fact that, as already mentioned, the view in the summary drawing is a "camera view" facing the source page, so when the scale of the view is changed, all the elements present on it are rescaled.

9.3. Right menu

New options in the right menu - properties of the edited field in the summary drawing (Illustration 108). For an empty field, only the option to insert a page view is available. On the other hand, when you select an already inserted view, the options for inserting a page (you can replace the current view this way) and centering the view become available in the "Properties" panel. The "Scale" option becomes active when you enter the card editing mode. You can then scale a single view or several views - for example, to align the scale for all of them at once. To do this, after switching to card editing mode, select the desired view or views with a click (in this case, holding down the Ctrl key) and, in the "Object Properties" panel, set the new scale (by typing the value from the keyboard or using the arrow keys).

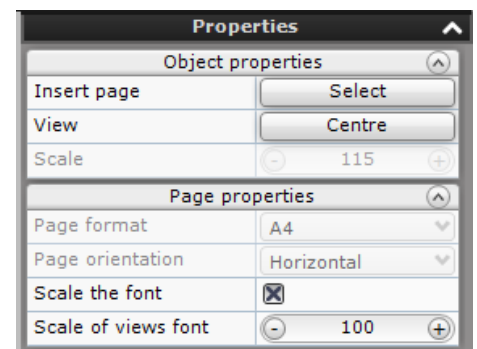


Illustration 109 Right menu of the page summary drawing

In the card editing mode, you can move the views in any direction within the field and zoom in and out, using the mouse (spinning the roller zooms in or out, and holding down the right button and moving the mouse allows you to position the view in the desired position).

9.4. Left menu

The left menu offers the option to add a page view and insert a set of views

In the left menu, active icons also allow you to:

- drawing your own shapes (polylines, rectangles, circles);
- adding texts and references;
- drawing table (as with the other pages, you can also insert a default table using the "Show Table" button);
- insert images.

Additional information

1. Instructional videos

- Playlist, Technical Documentation"

2. Shortcuts and commands

The document compares keyboard shortcuts in the .4CAD and visualization environments and lists the most frequently used commands in versions up to 3.Xi/7.X and version 4.X/8.X (both 34 and 64 bit versions of the environment). Find the document at: <https://www.cadprojekt.com.pl/zasoby/pdf/opisy-techniczne/shortcuts-4-0-8-0-eng.pdf>

This document provides an overview of keyboard shortcuts and commonly used commands in the .4CAD environment for visualization. The shortcuts and commands can be issued using either the mouse or keyboard. It can be accessed at: <https://www.cadprojekt.com.pl/zasoby/pdf/opisy-techniczne/shortcuts-4-0-8-0-64bit-eng.pdf>

In the above list, LPM and RMB stand for left and right mouse buttons, respectively. A command notation with a + sign (e.g. [Ctrl] + [Z]) indicates that both keys should be pressed simultaneously, while a notation with a >> symbol (e.g. [E] >> [Enter] or [Space]) means that you should first type E and then press [Enter] or the space bar.

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We would like to inform you that we provide training in the use of our programs. For more information, please visit our website: <https://www.en.cadprojekt.com.pl/trainings/>

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