CAD PROJEKT K&A

Operation manual

Visualisation Tiles and Grouts

CAD Decor 4.0, CAD Decor PRO 4.0

www.en.cadprojekt.com.pl

INTRODUCTION

This manual describes how to use the Tile Model and the Grout Model.

We wish you a pleasant and fruitful work with our software!

CAD Projekt K&A team

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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Visualization - design with tiles

1. Introductory remarks

CAD Decor and CAD Decor PRO programs offer numerous functions for applying and editing ceramic tiles and other wall and floor coverings, enabling quick execution of an effective room arrangement, based on the use of tiles along with decorations and inserts and other materials, made available in manufacturers' databases or added by the user himself to his individual tile database. The procedure for adding custom tiles to a user's database is described in the later in this manual. The current chapter describes the operation and use of the tile design function.

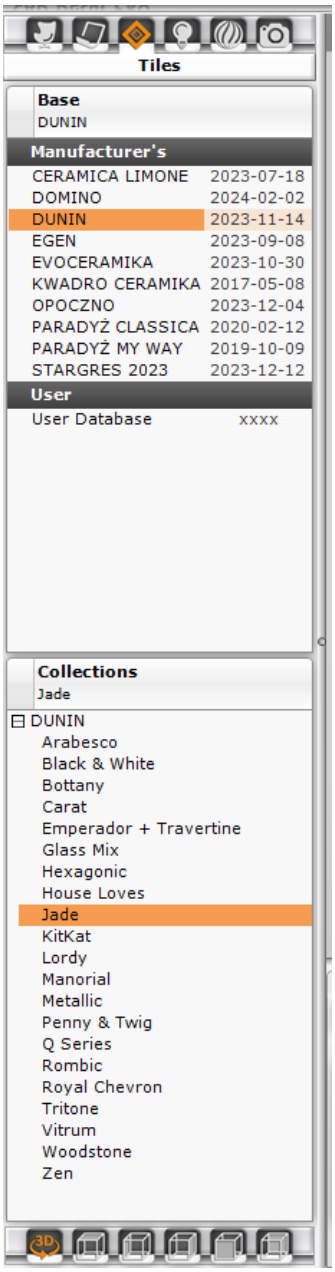


Illustration 1 Left menu, Tiles tab

2. Collection selection

The first step in designing with ceramic tiles is to go to visualization, by selecting the **[F12]** key or the icon **"Visualization"**.

Then select the **"Tiles"** tab in the left menu and the cladding base - from the list of **"Manufacturer"** or **"User"**. The name of the selected base will be displayed in the **"Base"** field at the top of the panel (Illustration 1).

In its lower part, however, you will see a list of collection types available in the database (e.g. **"Mosaics"** or **„Floor"**) (Illustration 2). After expanding the contents of the type (by clicking on the cross next to its name), you can select a specific collection (e.g. **"Fire Rocks"**) by left-clicking on it (it will be highlighted in orange). The name of the selected collection will be displayed in the **"Collections"** field, and the bottom panel will show previews of the tiles in it (Illustration 4).

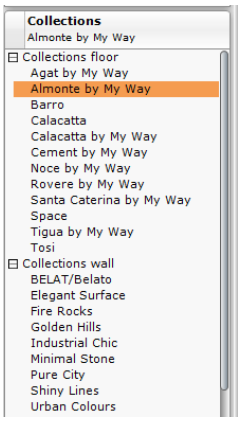


Illustration 2 List of collection types and collections

The lower panel is open by default on the **"Tiles"** tab - when you move to further tabs of it, you gain access to the plate-key functions, which we will present in the following sections of this manual.

The **"Tiles"** tab has buttons to switch between wall, floor and inserts tiles (Illustration 3). If there are no tiles of the selected type in the selected collection, the preview list will remain empty.

Illustration 3 Buttons to switch between tiles types

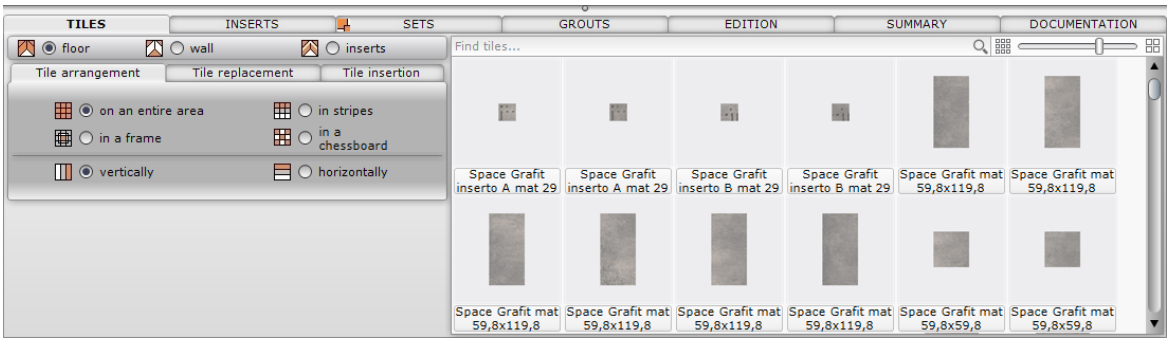


Illustration 4 Tiles" tab - with previews of tiles from the selected collection displayed, in a convenient enlargement

After pointing the cursor to the tile preview, a label with the name, dimensions, and net and gross price of a given tile will be displayed, and in the lower left corner of the visualization window - its enlarged preview (Illustration 5).

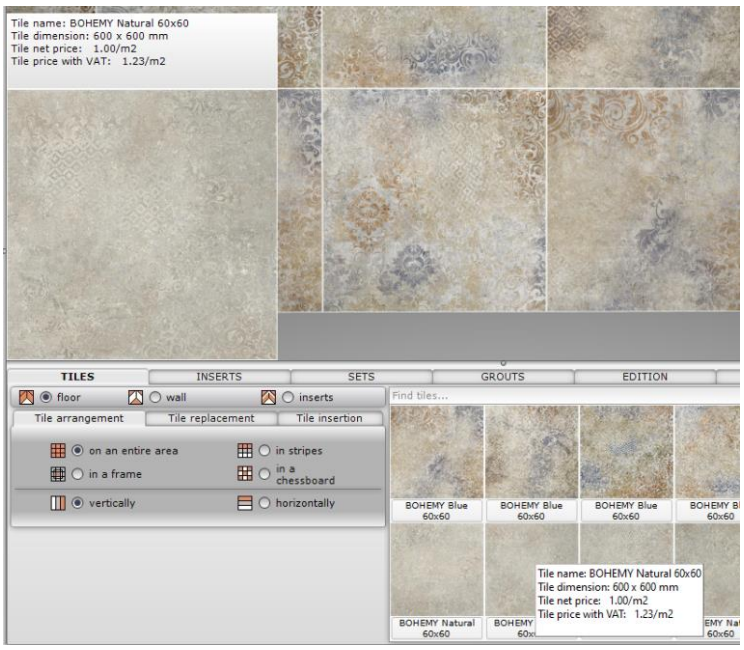


Illustration 5 Plate label and preview in left

Applying Tiles

1. Tile arrangement

Placing tiles on surfaces in the project is based on the drag-and-drop method, similar to textures. You need to click the left mouse button on the selected tile, hold down the button and move the cursor to the object to be tiled, and when the pink outline appears on it - release the button. The tiles will be placed on the indicated object. This can be done in one of four ways, which the user selects in the **"Tile arrangement"** tab (Illustration 6).

Arrangement	Description
On a entire area	- the basic way of applying tiles, from which you should start designing; - the entire area indicated is covered with tiles; - if rectangular tiles are applied, define the direction of their application horizontal or vertical;
In a frame	- the tiles are spread around the perimeter of the marked area; - possibility to specify the offset from the area border and the width of the frame (in mm); - In order to use this method of applying tiles, the area in question must first be covered with tiles applied over the entire area or with paint (paint module, we describe in a separate instruction);
In strips	- tiles are applied in strips (horizontal or vertical); - the location and position of the strip to be applied is indicated by a red outline, appearing on the wall; - strips can be applied to walls covered with paint and tiles or those that have not been covered with any material (in the latter case, point the cursor to the lower edge of the wall, just above the floor); - it is not possible to apply a strip of tiles on a wall covered with texture (it must be removed or replaced with paint or tiles before applying the strips); - you can define the offset from the point indicated by the cursor (in mm); - you can specify the number of rows of tiles (decimal values are also accepted); - alternatively, you can define the height of the belt (in mm);
In a checkerboard	- tiles are applied alternately to the previously tiled surface over the entire area; - applied tiles must have the same dimensions as the tiles applied previously, otherwise the operation will not be performed.

Appearance of the **"Tile Arrangement"** tab in different settings (Illustration 6).

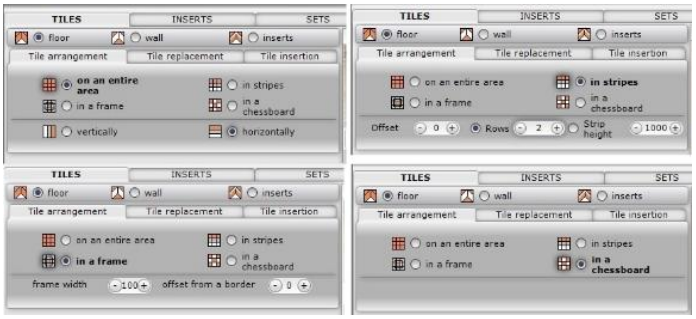


Illustration 6 "Tile arrangement" tab

When applying tiles to an area where other objects overlap (e.g., the wall to which the bathtub enclosure adjoins), the program will display a suggested list of areas that can be omitted - to save material (Illustration 7). Certainly, such a message will appear when placing tiles on the floor - the program will suggest

skipping the areas where the floor meets the walls. You can decide whether the detected areas should be subtracted when applying the cladding. To see exactly where an item in the list is located, click on it with the left mouse button - the corresponding surface in the project will be highlighted in red. If tiles are to be applied on it, click in the box on the left to remove the selection .√. If the user decides to tile all areas proposed to be cut off, select the **"Skip all"** button - the selections will be removed from all items in the list. In addition, using the **"additional area"** function, you can indicate another arbitrary area to be subtracted.

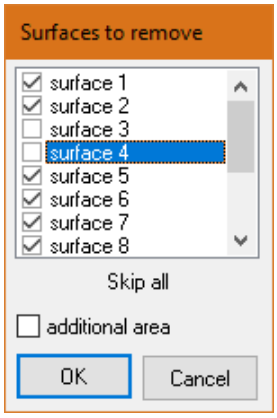


Illustration 7 Selection of areas to be subtracted

Note: Tiles classified as floor tiles can be applied to walls and vice versa if necessary.

Note: if the user makes a mistake while applying tiles, he can undo the last performed operations using the Undo icon icon or the keyboard shortcut [Ctrl + Z]. A maximum of 20 operations can be undone.

2. Tile replacement

If it becomes necessary to replace the tiles in a selected area with others, this operation can be carried out by applying a new tile to the area. However, if there are relatively many such areas, replacing each of them one by one can be time-consuming. Therefore, a tab was created: **"Tiles replacement"** (Illustration 8). It allows quick replacement of tiles in a project in three ways, described in the table below.

Note: Tile substitution is only possible for tiles of the same size!

Replacement	Description
singly	- is used to replace a specific tile with a new one; - after selecting this option, select the tile and, using the drag-and-drop method, apply it to the desired location; - the new tile will replace exactly the tile in the area over which the cursor will be located when the mouse button is released (note - the pink outline will appear around the entire area, not this particular tile);
on the area	- swaps all tiles of a given type in the indicated area;
In the entire design	- converts tiles of a given type into new ones throughout the project, regardless of what area the cursor will be over when the left mouse button is released; - perfect for color replacement of the entire collection while maintaining the arrangement.

3. Tile insertion

The **"Tile insertion"** option is used when creating tile layouts and when inserting inserts (inserts). When using this function, define the point that will be the axis of rotation when applying the tile to the selected surface, and the angle by which the inserted tile is to be rotated (the program also recognizes negative values of angles)

(Illustration 9). If a tile is inserted on an object already covered with other tiles, the space underneath it will be cut out and treated as a separate area.

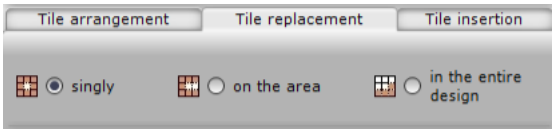


Illustration 9 Tiles replacement types

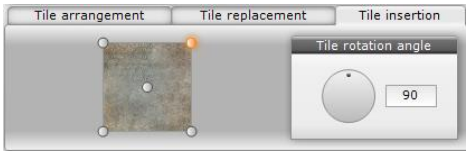


Illustration 8 Insertion of individual tiles

4. Applying inserts

Another tab of the bottom bar - **"Inserts"** (Illustration 10) is used for advanced placement of decorative tiles (so-called decors).

Illustration 10 Decorations" tab in the CAD Decor PRO bar

Before arranging decorations, it is necessary to:

- decide whether you want the decor to sit above or below the grout (applies to the **"stripes"** option);
- specify whether the tiles already in the area are to be moved (option: **"No cutting"**) or trimmed (option **"Cut tiles"** - will cut a strip of the width of the decoration, in which it will be lined) (applies to option **"strips"**);
- optional: specify the offset from the border of the area in which the decoration is to be placed (in mm) (applies to all application options);
- choose how to arrange the decors from the five available options, described in the table below.

Option		Description
Stripes	-	arranges inserts in horizontal or vertical strips in the indicated area;
Across the entire area	-	checking this option will apply a strip of decoration over the entire object, such as across the entire width of the wall, even if this requires cutting through several different areas;
Frame	-	decorations are spread inside the perimeter of the marked area;
	-	possibility to determine the offset from the area boundary;
Frame + corners	-	arranges decorations in a frame with corners;
	-	it is recommended to use this function when there are corner decorations in the collection (they will be automatically inserted in the appropriate places) otherwise the corners will be left empty
Path	-	in order to use this function, the user must first draw a path on the tiled area (how to do this is described later in this section);
	-	whether the decoration will be applied on the right or left side of the path depends on the direction of drawing (drawing the path from right to left will place the decoration on the right side, and similarly, from left to right will allow the decoration to be placed on the left side of the path).

5. Create and save tile sets

Creating custom layouts is one of the most difficult steps when designing with tiles, due to the need to lay out the layout elements properly. To begin, lay out the pattern on a tile-free wall using the **"Tile insertion"** function (note: do not create a layout on the floor!). The pattern should consist of as few tiles as possible. Examples of patterns and next steps are presented in the following subsections. The **"Sets "** tab has three parts: **"Insertion"**, **"Defining"** and **"Help"** (Illustration 11).

Illustration 11 „Sets" tab - different views

Option	Description
Insertion	- if there are ready-to-use sets stored in the manufacturer's database, the following symbol will be displayed next to the name of the tab: ; - you can use the manufacturer's proposed sets, applying them to the project individually (only the tiles that make up the set) or over the entire area indicated; - the use of user-created sets is analogous;
Defining	- after laying out the pattern using the **"insert tile"** option (**"Tiles"** tab), define the repeatability axes of the layout; - the individual steps are described in section 5.1. below the table;
Help	- displays abbreviated instructions for creating layouts.

We have examples of how to make tile sets on our website at: https://www.en.cadprojekt.com.pl/tile-layouts/

5.1. Example 1: rectangular layout

To create a simple rectangular set in the first place, you need to:

Illustration 12 Creating a rectangular layout

- open the **"Tiles"** tab and, using the **"Tile insertion"** option, arrange the pattern shown next to it on any wall(Illustration 12) (We remind you that you should **not** create an arrangement on the floor);
- go to the **"Set"** tab, to the **"Defining**" section;
- press the **"Indicate an area**" button;
- select the "**X**" button and indicate the repeatability of the pattern in axis **X**(red) and then the **Y** button and indicate the repeatability in axis **Y**(green);
- click the **"Set preview"** button, which will cause the layout to appear for a few seconds across the entire plane, allowing you to verify its correctness;
- a properly defined layout should appear as in the above illustration (Illustration 12);
- if the layout preview looks satisfactory, select the **"Save the set"** button and complete the data in the newly opened window (Illustration 13);
- The layout created in this way can be used in the project after opening the collection based on which it was created, and then the **"Set**" tab.

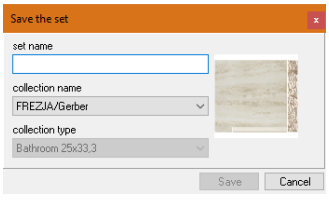


Illustration 13 Saving the set

5.2. Example 2: diagonally repeating layout

When creating such a set, follow the same procedure as described in the previous section, except that the tiles should be arranged as shown in the figure below. The illustration below shows the pattern and defined repeatability of the pattern in the X and Y axes for a diagonally repeating set, and the final result(Illustration 14).

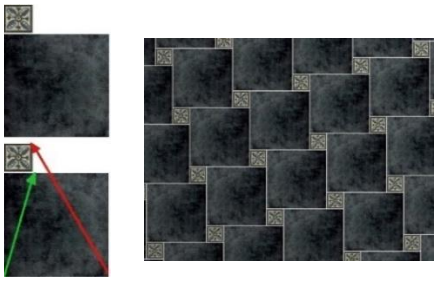


Illustration 14 Creating a diagonal layout

5.3. Example 3: laying tiles in a "herringbone" pattern”

The rules for creating this set are the same as in the above two cases. How to arrange the tiles and define the X and Y axes is shown in the following illustration (Illustration 15).

Illustration 15 Creating a "herringbone" tile layout”

5.4. Example 4: laying tiles in strips

Another way of making sets involves laying tiles all over the wall with defined stripes. In order to repeat the laid pattern on other planes, e.g. walls, it can also be written as a layout.

In order to do so, it is necessary to:

- lay tiles in strips on one of the walls;
- Go to the "**Sets"** tab and select the " **Indicate an area** " button;
- select the **"Area path"** button (if this button does not activate automatically, click on any point in the area to be outlined);
- click the cursor at successive points on the path to outline the area to be duplicated (the outline will appear in red);
- save the layout using the **"Save**" button;
- the set prepared in this way can be applied to the other walls in the project (Illustration 16).

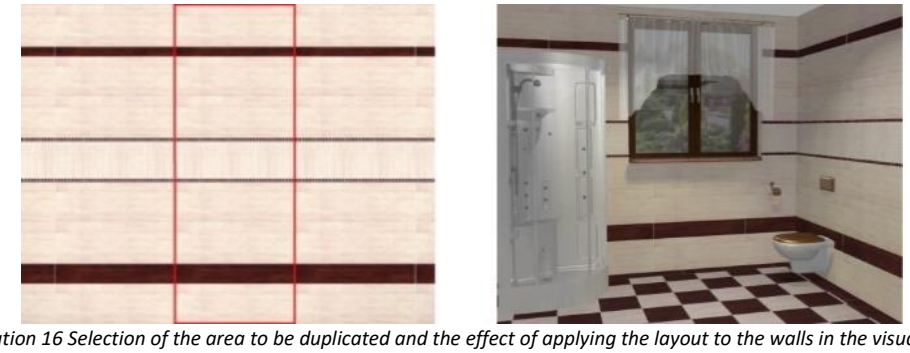


Illustration 16 Selection of the area to be duplicated and the effect of applying the layout to the walls in the visualization

Grout module

1. General information

The Grout module is found only in CAD Decor and CAD Decor Pro.

The Grout Module contains up-to-date manufacturer databases of dozens of products, including grouts, adhesives and sealants, as well as a Universal Base, which can be freely supplemented by the user in the Tile Base Editor. Both databases function independently of the ceramic tile databases and can be accessed by selecting any cladding manufacturer.

2. Working with the grout module

The Grout module (Illustration 17) automatically calculates the amount of mortars and adhesives used in a project by analysing the width of the joints and the thickness of the layers under the tiles. These values can be freely selected by the designer, within the range seen by the manufacturer, which determines the relevant properties of the products. The module suggests which products should be used together, what parameters will work best and protects against incorrect use.

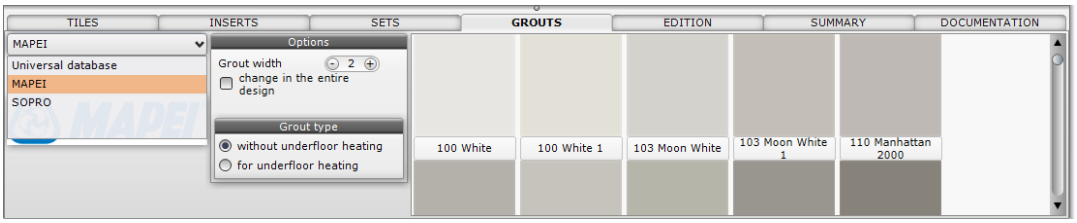


Illustration 17 Grout module

3. Applying grout from the manufacturer's base

Work in the joint module proceeds as follows:

- after applying tiles to the selected surfaces in the project and going to the **"Grouts"** tab, an electronic grout template from the selected manufacturer's database is displayed;
  grout is applied to the project using a ,,drag-and-drop" method;
- the width of the applied grout can be changed within the prescribed range at any time by setting a new value and applying grout to the selected area;
- in the **"Grout type"** panel, you can indicate whether the products will be used on surfaces with underfloor heating (options **"without underfloor heating"** and **"for underfloor heating"**), and the module will automatically adjust the minimum width;
- the smallest available width for standard joints is 1 mm, and for joints intended for underfloor heating is 4 mm;
- changing the width and color of the joints can also be done simultaneously throughout the project using the **"Change in the entire project"** option;
- the number of available colours changes with the width, because the manufacturer provides for specific values of this parameter for specific products - this protects users from making mistakes due to insufficient knowledge of construction chemicals.

4. Summary

The **"Summary"** tab presents lists of the ceramic tiles and other coverings, Tikkurila paints, and grouts and adhesives used in the project(Illustration 18):

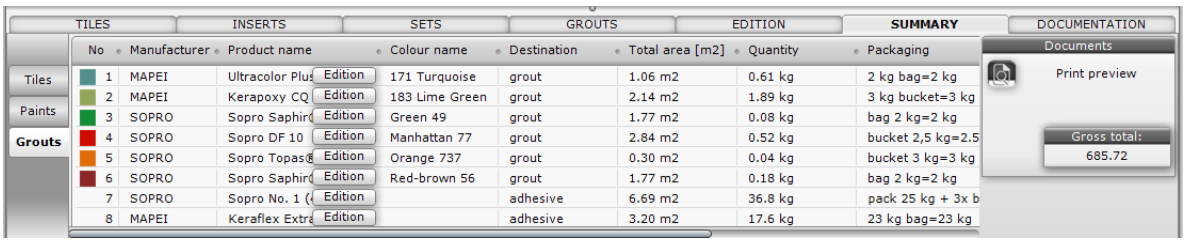


Illustration 18 List of products used in the project

- in the **"Summary"** tab, you can edit the depth of the joints and the thickness of the adhesive, which is automatically added to the project, as well as set the number of layers of sealant or replace the product with another one (Illustration 19);
- it gives the names of the products used, their color and purpose, the area occupied, the quantity needed to cover such an area, the number and type of packages, and the gross value according to the manufacturer's price list;
- please note that the prices in the database may differ from those on the market depending on the offer of individual distributors;

Illustration 19 Edition of Sopro products in the summary

- after changing any parameter of the products used (e.g., grout width or glue thickness), the values in the statement are automatically updated;
- the current required quantity and gross value of products is always displayed;
- in the **"Summary"** tab, you can generate a report containing the information necessary to place an order (Illustration 20);

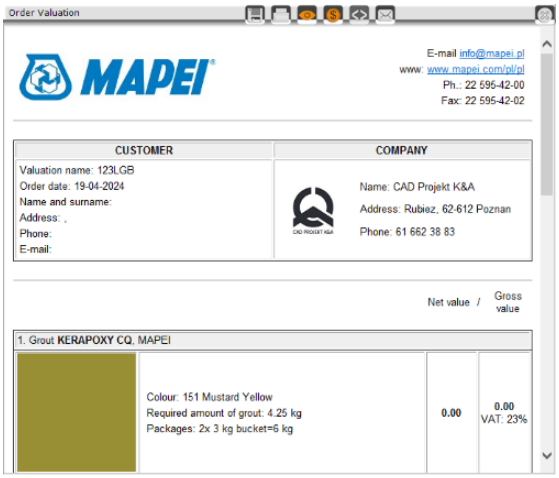


Illustration 20 Report of Mapei products used in the project

- the report includes a preview of the color, the color designation of the product, the amount of grout, adhesive or sealant needed, the number and type of packages and their total weight, the net and gross values, and the total costing value,

- here you will also find the manufacturer's contact details, order information and studio data,
- the module automatically adds the required adhesives and sealant, belonging to the same product system,
- however, it must be remembered that the actual consumption is affected by the specifics of the object, the way the work is carried out and the preparation of the substrates,
- for the purpose of calculations, it was assumed that the substrates on which the work will be performed are appropriate, properly prepared, level and durable,
- any adjustments to the materials are recommended to consult with the manufacturer's company representatives.

5. Application of grout from the universal base

- a universal base is also available, to which you can add new colours or rename grout using the Tile Base Editor, described later in this manual;
- after switching to the universal base, the palette also becomes available, where you can point the cursor to any color and use it in the project;
- you can also specify the RGB value of the colour you are looking for (Illustration 21) after finding the colour, click in the color field and apply it to the design;
- grout is applied to the project using a convenient ,,drag-and-drop" method;

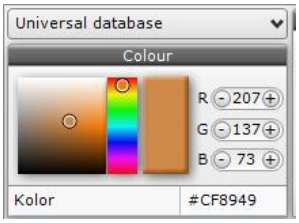


Illustration 21 Color choice

- using the universal base, you can freely change the width of the applied grout in the range from zero upwards, setting the value and dragging the grout to the selected area;
- grout selected from the universal base and from the palette are not subject to pricing.

The contents of the universal database can be changed in the Tiles Database Editor (for more information on this topic in the is below instructions).

Editing areas covered by tiles

The tiled areas are editable. To edit an area, double-click the left mouse button - a pink outline will appear, and the bottom menu panel will automatically switch to the **"Edit**" tab (Illustration 23). At this point, you can expand the pop-up menu under the right mouse button (Illustration 22).

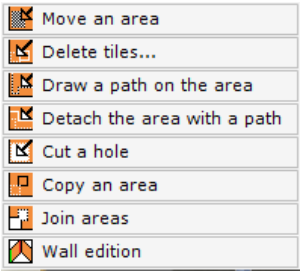


Illustration 22 Tile pop-up menu

The editing functions are described in the following table

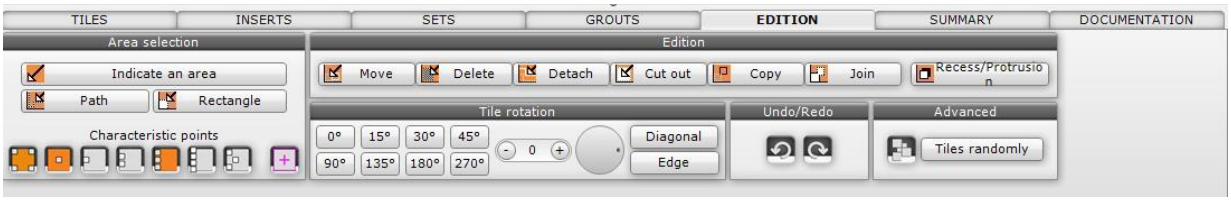
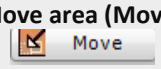
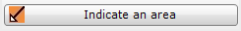
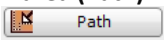
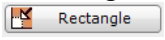


Illustration 23 The appearance of the "Edit" tab"

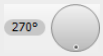
Function	Description
Move area (Move) 	- allows you to move the tiles so that the grout starts at the desired point; - to do this, select the "**Move**" option, click the left mouse button on the edge of the tile, release the button and, moving the mouse, adjust accordingly; - when the desired position is reached, click the left button again;
Remove tiles (Delete) 	- deletes tiles in three variants: - only tiles from the selected area (e.g., from the indicated section of the wall); - all tiles from the object on which the marked area is located (e.g., from the entire wall); - all the tiles from the whole design;
Indicate an area 	- allows you to indicate a new area for editing; - after selecting it, you can draw a path or rectangle on the area, with the help of which a new area will be delimited;
Draw a path on the area (Path) 	- draws a path on tiles; - It displays as a line in red with a red square at the end point; - It can be used to draw any complex shape, using the characteristic points of the tiles (such as their corners); - Immediately after finishing drawing, right-click and select **"Detach the area with a path"** from the pop-up menu, or click **"Detach"** in **"Edition"**; - if the path is not to be closed, right-click and select **"Finish"** from the new pop-up menu (the path drawn in this way can be used to apply inserts tiles);
Detach the area by a path (Detach) 	- operates based on a pre-drawn, closed path; - cuts off the area bounded by the path from the rest of the object; - only after the area has been defined can tiles be applied to it;
Rectangle 	- draws a rectangle in the indicated area; - drawing requires clicking on two points - the initial point and the point that is the opposite corner of the rectangle; - while drawing, the dimensions of the rectangle being created are displayed; - drawing is based on the characteristic points of the applied tiles;
Characteristic points 	- the ability to select different points of attraction on the surface of the tiles, based on which the drawing of a path or rectangle on the area covered with tiles will take place;

	- which points will be taken into account is defined by the user by selecting the appropriate icon (e.g., corners only, canter points of tiles, two or three, or more points on the edge of a tile, etc.) - the last icon is used to display a grid preview of the selected feature points;

Cut a hole (Cut out)
 
	- is used to cut holes in bathtub enclosures or under-counter washbasin tops;
	- in order to cut a hole in the bathtub casing, one must:
	  - apply tiles to the object;
	  - click twice with the left mouse button on a bathtub element (such as an edge) to select it (a pink outline will then appear);
	  - click twice on the tiled area at the top of the platform, which is the bathtub enclosure;
	  - expand the pop-up menu and select the "**Cut a hole**" button;
	- while the hole is cutting out, the progress of the operation can be seen in the bar next to the "**Light up**" button;
	- the operation of cutting a hole in the workshop is analogous (there must always be 2 elements indicated at the same time - in this case, the washbasin and the surface of the worktop covered with tiles);

Copy Area (Copy)
 
	- to copy tiles from one area to another you need to:
	  - select the area to be copied;
	  - select the "**Copy**" button;
	  - indicate the area where the copied tiles are to appear by clicking on it once with the left mouse button;
	- function very useful when applying tiles to round parts;
	- it can also be called by using the keyboard shortcuts:
	  - first, deselect all previously selected areas by pressing the key **[Esc];**
	  - then position the cursor on one of the tiles that covers the area you want to copy and press the**[Ctrl +C]** keys;
	  - then indicate, without clicking, the successive areas where the tiles are to be applied and - holding down **[Ctrl],** simultaneously move the mouse and press the letter **V** one by one, thus applying one tile at a time;
	- only tiles of the same shape are replaced;
	Note: Holding the V for an extended period of time may cut a hole in the part!

Connect areas (Join) 	- is used to connect disconnected or previously separated areas; - to do this, click on one area, select the **"Join"** button, and then click on the adjacent area to be merged; - the division between areas will disappear and the tiles from the first area will be applied to the second area; - possible differences in tile dimensions do not matter; **Note: Merging areas will automatically apply the tiles from the first area to the added area.**
Wall edition	- allows you to shorten or lengthen a tiled wall directly in the visualization; - option useful when the user decides to change the dimensions of the room already after the tiles have been applied to the walls (if the modification was made in ,,**Wall Wizard"**, the tiles would be lost); - length changes can be made in two ways: - In the newly opened **"Edit wall..."** window, in the **"length change (mm)"** field, enter the desired length or change it dynamically using the slider bar after-

	lower (which edge of the wall is moved depends on the option selected in the **"modified side"** field: right [red] or left [green]); - selecting the option **"adjust changes to the tile size"** will change the slider to step, where the unit will be the width of the tile applied to the edited wall; - thanks to this solution, it is possible, for example, to precisely match the length of the partition wall to the size of the tiles without having to trim them; **Note: If you see a white area on the floor after shortening the partition, you need to remove the tiles from the entire floor (option: "Delete from the object") and then reapply the tiles.**
Recess/ Protrusion 	- allows you to create decorative elements - concave (recesses) or protrusions (projections) based on the tiles previously applied to a given surface (using their outline); - in order to be able to create a recess or protrusion, you must first indicate an outline - by selecting it using the **"Path"** or **"Rectangle"** option; - after determining the outline, click on the **"Recess/ Protrusion "** button and use the slider to define the dimensions and type of the element (if you move the slider to the left (negative values) you will get a recess, while if you move it to the right (positive values) you will get a protrusions (Illustration 24);  *Illustration 24 Inserting a recess or protrusion* - after setting the dimensions, click the button to confirm them and insert the object; - the function of creating recesses and protrusions based on applied tiles simplifies design with cladding, as it allows changes to be made to the shape of walls after they have already been applied;
Tile rotation   	- rotates the tiles in the marked area by a given angle; - the angle can be selected by clicking on the buttons corresponding to the selected angle values (e.g. 0°, 15°, 30°, 45°, etc.); - alternatively, it can be determined dynamically by manually pointing to a point on the circle at the appropriate location; - changes made are continuously visible in the visualization; - the **"Diagonal"** and **"Edge"** buttons apply to irregularly shaped objects; - to align the grout to a diagonal or selected edge, select the appropriate option and point the cursor to the desired point or edge;
Tiles randomly 	- works on areas covered with uniform tiles of irregular pattern; - mixes the superimposed tiles, rotating them freely, thus avoiding pattern repetition;
Undo/Redo 	- are used to undo or redo individual operations; - to undo the operation you can also use the keyboard shortcut **[Ctrl + Z]**, and to redo it: **[Ctrl + Y.]**; - up to 20 operations can be undo or redo at one time.

1. Summary

It is created after the design process is completed. It provides a detailed summary of the tiles used in the project (Illustration 24). It contains the following information:

- the name of the collection from which the tiles used in the project come;
- the dimensions of the tiles used (divided into whole and cut tiles);
- the units in which the tiles are sold and the net and gross prices;

- the weight of the tiles used in the project and the number of packages;
- summary of the area occupied by the tiles in m^2, which can be used to prepare a preliminary quote for the contractor's work.

Selecting an item in the statement selects the place in the project where the selected tile was used. The red color of the selection specifies whole tiles, the pink color - trimmed tiles. In addition, in the right part of the window a preview of the selected tile is presented. Next to the ordinal number of the tile is a square in red (non-optimized tile) or green (optimized tile). **"Optimize"** is to use the waste of a trimmed tile elsewhere in the project. By default, floor and wall tiles are optimized by default.

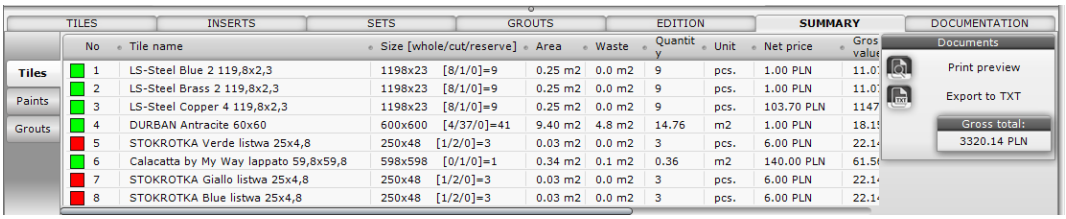


Illustration 25 List of tiles used in the project

2. Optimalization parameters fir cutting tiles/valuation

Optimization is a unique functionality that allows the waste from a cut tile to be used elsewhere in the project and thus - to significantly save material. It can be turned on or off at will.

By default, optimization is not set for inserts tiles due to the need to maintain pattern repeatability.

Enabling or disabling optimization and adding reserve tile is done by double-clicking on the tile name and changing the settings and entering data in a new window (Illustration 26). Reserve tiles, is entered based on percentage, pieces or pieces/m^2. The first and last values are not available for non-optimized tiles (Illustration 27). The inventory added to the tiles will be displayed in the **"Summery"** tab as an item next to the ordinal number or and included.

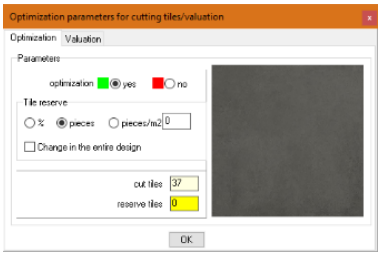


Illustration 27 Number of tiles cut with optimization

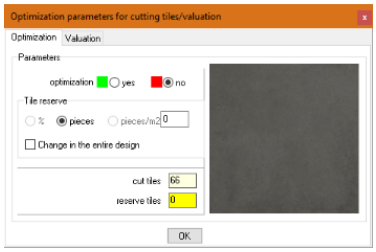


Illustration 26 Number of tiles cut without optimization

In addition to the optimization function, in the **"Optimalization parameters for cutting tiles/valuation "** window, the **"Valuation"** tab offers the option to round to whole packs (Illustration 28).

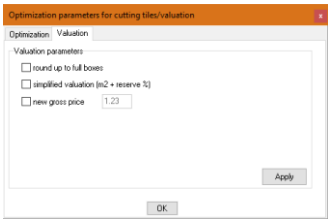


Illustration 28 Option to round to whole boxes

3. Printout of the summary

To print the statement, select the **"Print Preview"** icon or **"Export to TXT"** . The first one generates a statement **"Order valuation"** in graphic form (Illustration 29), and the second one in the form of a text file. After clicking on the first icon, you can fill in the data of the project or studio (necessarily required data is the order number), approving the entered information with the **"Save"** button (Illustration 28). On the other hand, by clicking on the second icon, you should indicate the save location and file name.

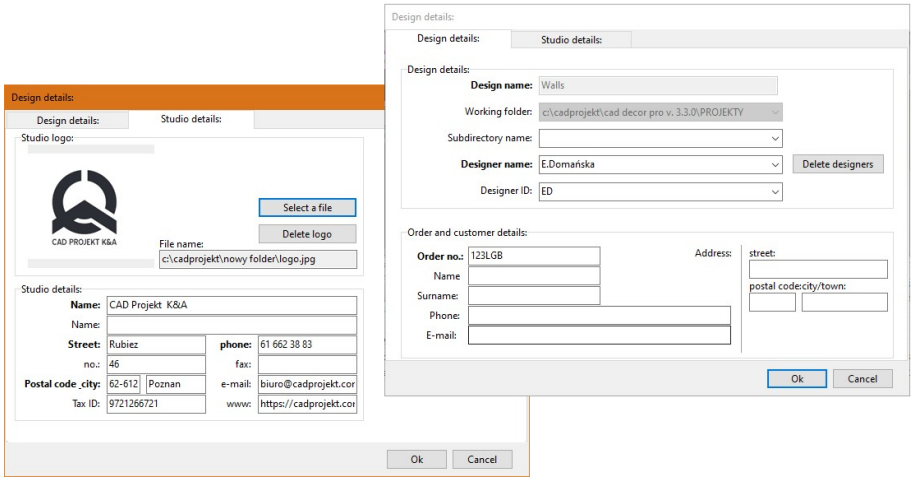


Illustration 29 Project and studio data window - view of both tabs

The icons of this window have the following functions:

- saves the order valuation on disk as an HTML file;
- prints a valuation;
- hides or displays tile previews;
- hides or displays tile prices;
- hides or displays the manufacturer's code;
- sends a order valuation via e-mail.

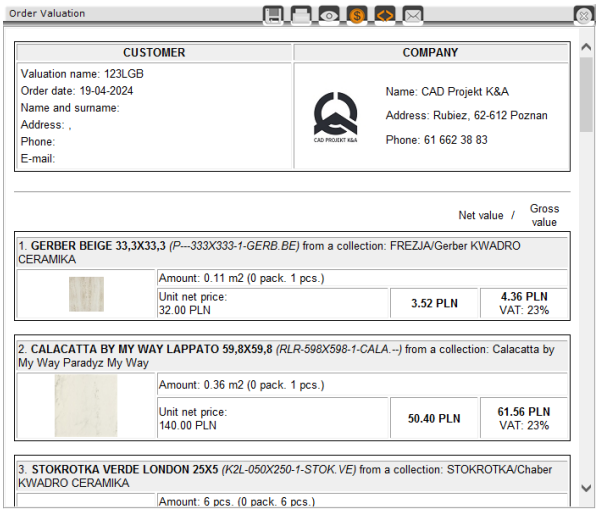


Illustration 30 Report window of used tiles

Note: Waste (trimmed tiles with a size of less than 2% of the whole tile) is not included in the valuation and summary.

Technical documentation of tiles

On the ,,**Documentation**" tab (Illustration 31), you can highlight individual areas with tiles that are less than the set %, trimmed, whole or all used. The item **without tiles** allows you to deselect previously selected options. The above options for highlighting tiles work in combination with several of the ,,**Visibility of walls**" options (transparent walls, solid walls or tiles only), and you can then obtain areas with different combinations. The 'Statistics' panel shows the percentage of whole and trimmed tiles used in the project.

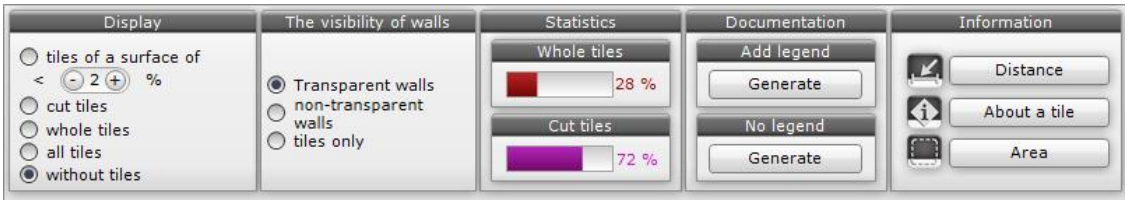


Illustration 31 Documentation tab option

The technical documentation generation function (under the **"Documentation"** tab) allows you to transfer a view of the laid tiles to a project in the .4CAD environment. To generate the documentation, you need to:

- hide all equipment elements in such a way that only elements covered with tiles remain (walls, landings, steps, enclosures);
- then, using the icons  specify which of the flat layouts is to be generated (projection on the selected wall, floor);
- hide the walls that obscure the selected view;
- go to the **"Documentation"** tab and in the **"Add legend"** or **"No legend"** panel (depending on whether you want to display a list of tiles visible on the layout) - click the **"Generate"** button;
- the selected layout will be inserted into the project (in the environment) along with the color description of the tiles used in the project (legend - if this option was selected) (Illustration 32);
- on the generated layout you can freely dimension the tiles.

You can create projections on selected parts of the room. The generated, dimensioned views can be printed directly from the environment (a description of the printing procedure is available in a separate manual). The illustration opposite shows a floor plan of a small bathroom with dimensioned tiles.

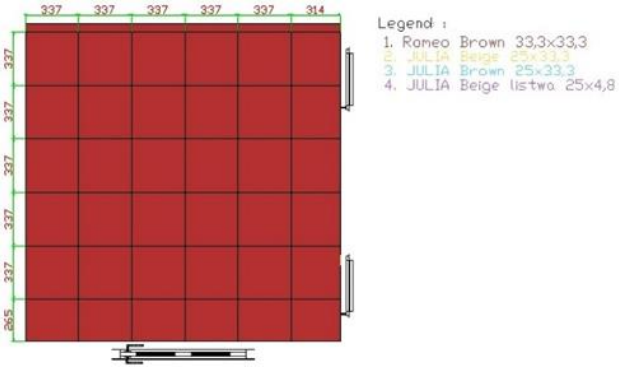


Illustration 32 Dimensioned tile layout

If, on the other hand, the orbital view is selected (after the icon **"Perspective"**), a tile grid in white (with a black background) or black (with a white background) will be applied to the designed room in the linear view. The legend will not be generated, regardless of the selected generation option.

1. Functions of the icon menu "Information”

 **„Distance”** - is used to measure the distance between points - click on the first point and the end point, and the distance dimension will appear on the screen.

 **„About a tile**” - selecting this icon and pointing the cursor at any tile will receive information about the collection from which it comes. This information is in the form of a hyperlink, which allows you to open the used given collection. This function is used for project finishing and corrections. Available under the key**[F2].**

 **„Area”** - Selecting this icon and moving the pointer to the area covered by tiles displays information about the area occupied by tiles. This function is available under the key **[F3]**.

Saving and loading a interior

The program is equipped with a function that allows you to save a designed room and insert it again into (any) project - as a result, you can get, for example, two identical rooms in one project. The function is available from the .4CAD environment. Select the icon  **"Save Interior"** from the icon bar **"Visualisation"** and select walls (and optionally other objects) to be saved. To finish the selection, select the **[Enter]** key. Then you need to determine the base (insertion) point of the saved room by clicking the left mouse button. The **"Save File"** window will open, where you need to specify the name and location for saving the files. Two files will be created: **DWG** (responsible for the geometry of the saved room) and **P3I** (information about the location and colours of the tiles).

To load a saved room (or part of it), select the **"Load Interior"** icon  from the **"Visualisation”** bar. This will open the **"Open"** window allowing you to point to a **DWG** file with a previously saved room, which can be inserted into the design by left-clicking on the selected point and then (optionally) rotating the inserted objects around the insertion point (analogous to inserting interior elements using the "point and angle" method).

Note that the DWG file to be opened must have been previously created using the Save Room option. If you try to load a model file that was created in any other way, you will receive a message stating that the file is missing.

Note: If the user wants to save the project with the inserted object, the file name cannot be the same as the name of the inserted model. Attempting to save will result in a message that the specified file already exists.

Tile Database Editor

1. Introductory remarks

The **"Tile database Editor"** is a separate module for the programs. It is included in CAD Decor and CAD Decor Pro. For CAD Kitchens, it is an additional module that must be purchased separately.

It allows you to edit tile prices in existing producer databases and add tiles on your own to a user's private database. To launch **"Tile Base Editor"**, select from the **<Start>** computer menu: **Start** .→ **CAD Decor PRO→ Tile Database Editor**. This module allows you to edit prices in databases of cladding manufacturers (ceramic tiles, glass moldings, mosaics, floor panels and others), which we make available to you in our programs and through our website. First of all, however, this module allows you to add tiles and other coverings on your own to your private database, which allows you to create a unique and customized database of finishing materials.

Please note that the image files you add must meet certain requirements, as described in this section, to ensure proper visual effect.

2. Getting started with the "Tile Database Editor"

After opening the **"Editor"**, select one of the available tile bases from the **"Base"** item (Illustration 33).

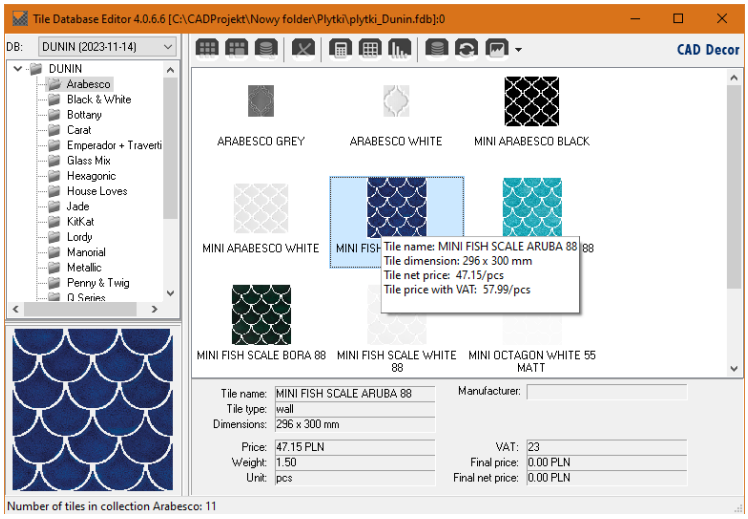


Illustration 33 Base selection and editor window appearance

If the user intends to make a price modification to the selected manufacturer's base, he should select the manufacturer base he is interested in from the list. If, on the other hand, he intends to create his own collection of tiles, he should indicate **"User database**".

Under the name of the selected base, the list of available collections will expand in the form of a tree, while the right part of the window will display previews of the tiles included in the currently highlighted collection. If you find it more convenient to operate in list or detail view, you can switch the view using the last icon in the module's top menu: "**Change view**" (Illustration 34).

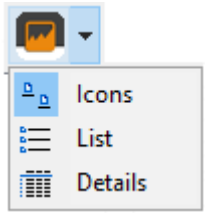


Illustration 34 'Change view' icon

3. Icon menu of the Tiles Database Editor module

Icons of the main module window:

„Add a new collection or collection type” creates a new collection in the user base (function also available under the shortcut **[Ctrl + K]**); specify the type and name of the new collection (Illustration 35).

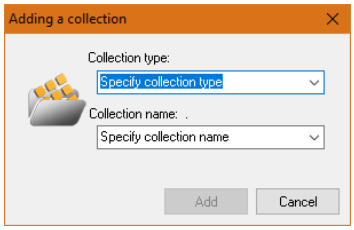


Illustration 35 Adding a new collection to the user database

„Add a new tile to the selected collection” adds new tiles to the user's database (also under the shortcut **[Ctrl + N]**) (after selecting this icon, a new window opens in which you need to fill in the necessary data) (Illustration 36).

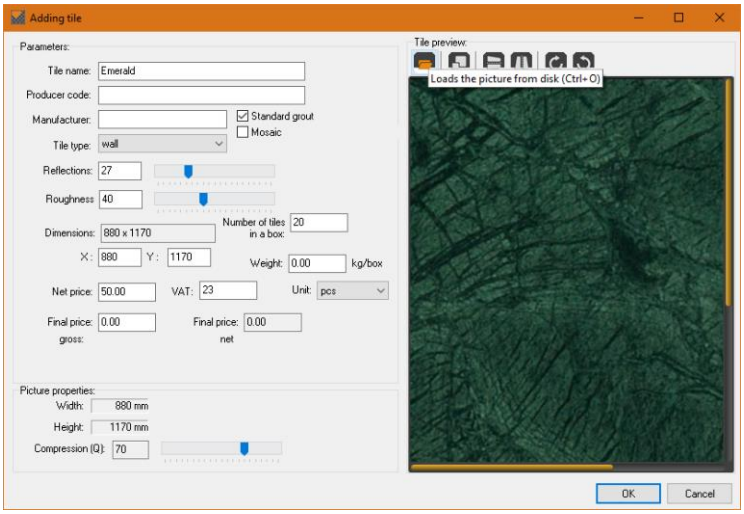


Illustration 36 Adding a new tile to the user base

Icons of the "Adding tile" window:

„Loads the picture from disk (Cltr + O)” - The first icon of the **"Add tile"** window. It allows you to search for a tile preview file on your computer disk and load it into the editor. Once the image is loaded, the other icons of this window become active, i.e. the button for scaling, horizontal and vertical reflection, and for rotating the preview to the right or left by 90°.

„Scales the picture to the given dimensions(Ctrl + S)” – allows you to freely change the dimensions of the file preview. The illustration opposite shows the scaling of the preview of the tile entered into the base (Illustration 37). It can be done with the original proportions of the preview preserved (the **"preserve ratio"** option is checked - a do-thought setting) or without their preservation (uncheck the option).

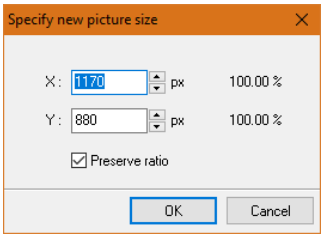


Illustration 37 Scaling image

„Flip horizontally" / "Flip vertically” mirror the preview horizontally or vertically.

„Rotates the picture to the right/left by 90 deg." rotate the preview clockwise or counterclockwise.

„Exports the tiles to the user database(Ctrl + E)" exports a selected tile from another database to your database (Illustration 38).

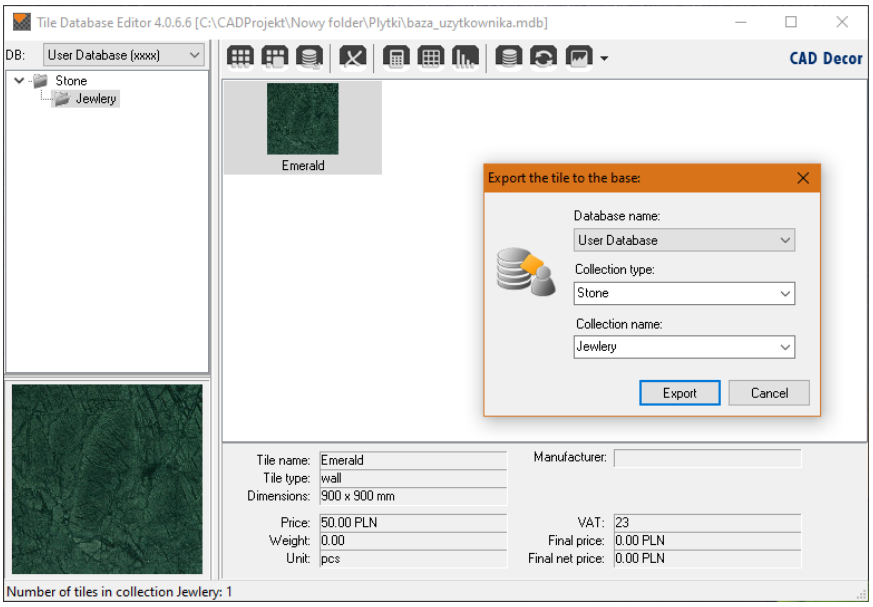


Illustration 38 - Tile export to user base

To export a tile, select in the list of databases the manufacturer database you are interested in, and in it the specified collection and tile. Then click the "**Exports...**" icon or press **[Ctrl]** and **[E]** simultaneously. Indicate the type and name of the collection in your database and click "Export". The selected tile will be added to the indicated collection in your database.

Note that the export function is only available for selected manufacturer bases.

„Delete the selected object (Del)" deletes the object selected at the time of clicking on this icon, that is, the selected tile, collection or collection type (operation also available under **[Delete]**). Each time, a message will be displayed asking if the user is sure he wants to delete the selected objects, as there is no way to undo this operation (Illustration 39).

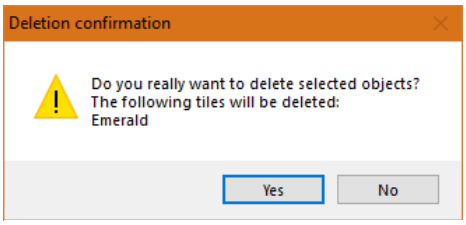


Illustration 39 Request for confirmation of plate removal from user base

„Currency and exchange rate settings" - opens the **"Database properties"** window, where you can change the type of currency (prices producer and final price), as well as to set the currency converter according to the current exchange rate, and assign discounts, margins and VAT for prices included in the base (Illustration 40) regardless of whether it is producer database or user database - in the panel **" Currency and exchange rate"**.

Note: Some of the information in the Base Properties window is not editable: "Basic Data", "Producer's Contact Information", and "Permissions" cannot be changed by users.

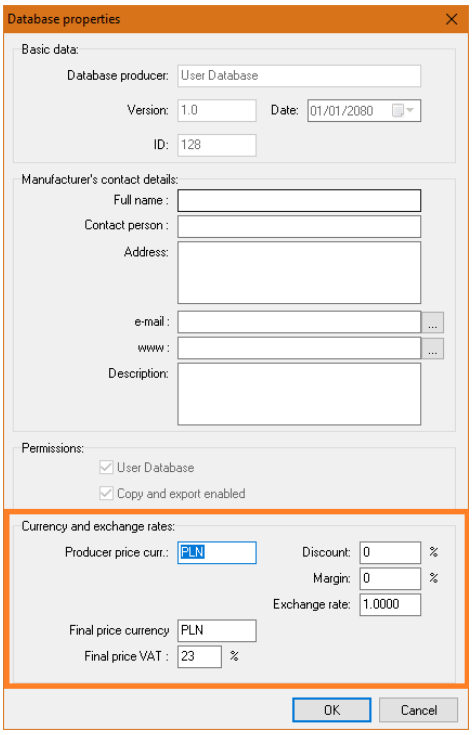


Illustration 40 Currency and exchange rate settings

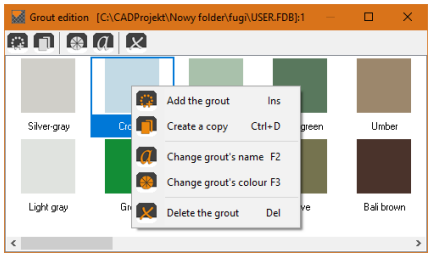


Illustration 41 Editing grout - context menu

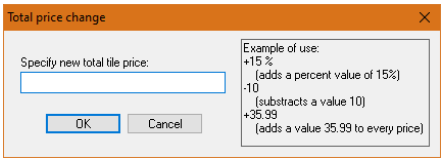


Illustration 42 Change of the final price in collection

 **„Grout editor”** opens the grout editing window, where the user can define the color scheme and naming of grouts. In this window, you can add or copy grouts one by one, giving them any colours from the color palette (Illustration 41). Colours and names can be changed using the pop-up menu or icons on the top bar of the window.

Icons available in the **"Grout editor** window.”:

 **„Add the grout (Ins)”** – allows the insertion of grout of any color.

 **„Create a copy (Ctrl + D)”** – copies the currently selected grout.

 **„Change grout's color (F3)”** – opens the window for selecting a new color.

 **„ Change grout's name (F2)”** – edits the name of the selected grout.

 **„Delete the grout (Del)” -** removes the indicated grout (after confirmation).

The other icons of the "Tiles Database Editor.”:

 **„Change price(F3)”** - allows you to change the price of any tile in the user's or manufacturer's database. If the user does not select a specific tile, the prices of all the tiles in the currently selected collection will be changed; however, when a single tile is selected, only its price will be changed (Illustration 41).

 **„Reloading database from disk (F5)”** – causes refreshing of the contents of the user base, including entry of the last saved changes, so that the latest version becomes immediately available in the program (e.g. you can immediately use the newly entered tile in the current project).

 **„Change view”** - allows you to switch between the icon view, the list and the list with details.

4. Editing producer databases

The editable element of the manufacturer bases is the prices of the tiles. To change the price of a selected single tile, select the base of a given manufacturer from the list, then the type and name of the collection and double-click with the left mouse button on the preview of the selected tile. An editing window will open, in which the only active field will be **"Final price gross**" (Illustration 43). After entering the new price, close the window using the **"Ok**" button.

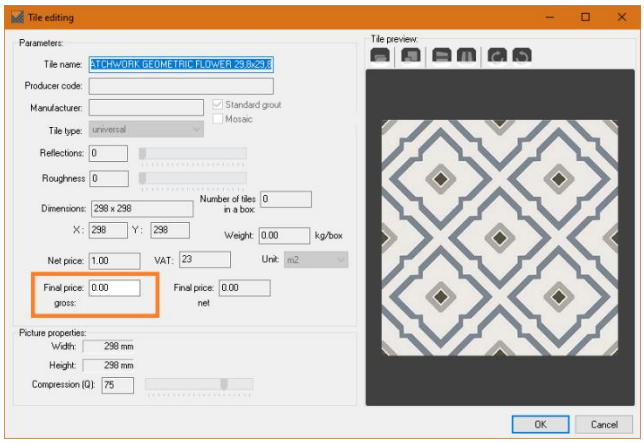


Illustration 43 Editing the plate from the manufacturer's database

In the main window of the **Tiles Database Editor**, you can also select the icon **"Change Price"** and in the newly opened window enter the new value. If a single tile is selected when the icon is selected, the new price will be entered only for that tile, while if the collection name in the left part of the window is selected, the changes will be made for all elements of the collection (Illustration 44). The new tile prices will be included in the database, accessible from program. To exit the editing window without making changes click **"Cancel"** or icon.

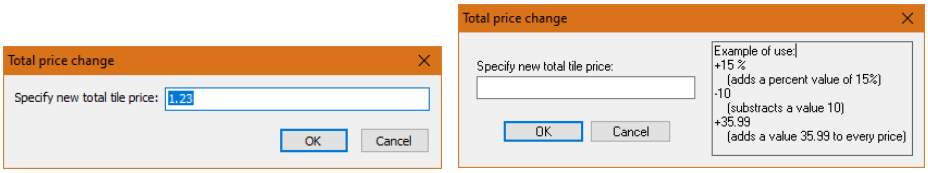


Illustration 44 Changing the prices of tiles in the database - for a single tile and for all at once

5. Create and edit your own tile database

To create your own tile library you need to:

- select "**User database**" from the list and click on the "**Add new collection(...)**" icon;
- enter the type and name of the new collection and click the "**Add**" button";
- in the left part of the "Editor" a new item will appear in the collection list - select it by clicking the left mouse button and then add tiles to it using the icon "**Add tile (...)**" ;
- in the newly opened window of adding a tile, load the tile preview file and fill in all the required information;
- optionally, immediately after adding a new collection, you can move the prepared files with tile previews into the "Editor" field using the "drag and drop" method (in this situation, it is possible to add more than one tile at a time) - this will open a window in which you should enter the following information:
    - name and manufacturer code;
    - type of tile - floor, wall or edge (decorative) or universal;
    - **standard grout** - by default surrounds the tile on all sides; unhooking this item activates the **"Grout edition"** button, which opens a new window (Illustration 45) allowing you to subtract grout from a tile edge - provided you unhook ALL edges at once (Illustration 46; (if you unhook 1, 2 or 3 edges, grout will still be added by the program);

- **„defined corner"** - option available only for collections containing edge tiles; allows selection of the corner to be added to a given tile;
- Reflections - determined on a scale of 1-100;
- dimensions - in X and Y axes - given in millimetres;
- number of tiles in a package - this information is optional;
- weight - in kilograms per package, optional information;
- net price, VAT, net and gross final price;
- unit - selectable pieces or square meters.

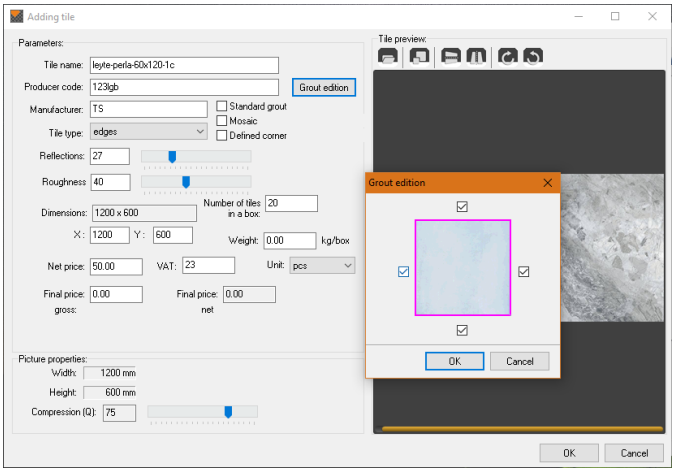


Illustration 45 Grout edition - tile will insert with grout

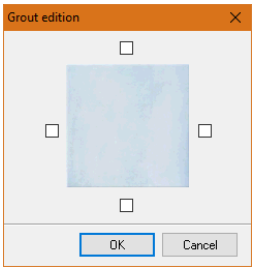


Illustration 46 The tile will insert without grout

Note: it is possible to add more than one tile to a newly created collection. To do this, after adding a collection to the User Base, without selecting the "Add new..." icon, you should drag the previously prepared tile images in JPG format to the edge of the editor window (using the "drag and drop" method). This will open several "Add tile from file..." windows. - for each file to be added(Illustration 47).

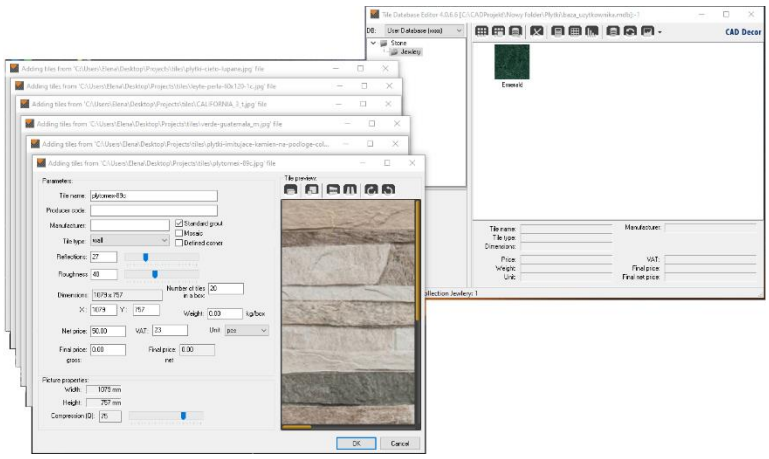


Illustration 47 Adding several tiles at once to the user base

6. Adding a mosaic to a user database

To add a mosaic to your own tile database you need to:

- prepare a photo of the mosaic tile with a resolution identical to the size of the tile (**1 pixel per 1 mm**);

- the output photo can be in a higher resolution - this will ensure a better appearance of the tiles in the visualization;
- resolution can be modified using a professional photo editing tool;
- next, the grout should be drawn on the photo of the tile - this is carried out as follows: where the grout is visible in the photo, apply lines with a thickness corresponding to the width of the grout in reality, on the principle of 1 pixel = 1 mm, in a color with a code designation in RGB space: **R = 255, G = 0, B = 255** (shade fuchsia) (Illustration 48);

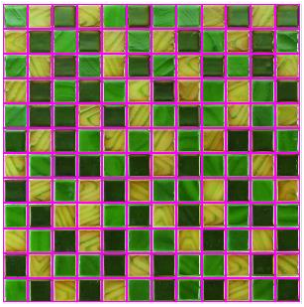


Illustration 48 Grout traced using a photo editing tool

- **Maintaining the correct color designation is extremely important, as our programs recognize the exact color as a grout**,
- the joints should be drawn with a tool that guarantees a uniform shade of the applied line- such as a pencil (Pencil Tool- in Normal mode) or a moving border (Rectangular Marquee Tool), which is filled with the desired shade;
- the use of a Brush Tool does not allow the joints to be drawn correctly;
- w presented procedure, there is no need to outline the grout around the mosaic preview;
- after applying the grout lines, save the file to disk in BMP format;
- when saving a file, make sure its settings are as follows: File Format: Windows, Depth: 24 Bit;
- the file prepared in this way should be moved into the **"Editor"** field using the "drag and drop" method (after first indicating the collection to which it is to be added -see point 3 of this chapter);
- in the newly opened window provide the necessary data;
- the options **"Standard grout"** and **"Mosaic"** should be selected;
- enabled option **"Standard grout"** will add grout to the edge of the mosaic;
- thanks to the active option **"Mosaic"** the applied mosaics will be automatically optimized;
- optimization of mosaics proceeds differently from other tiles, because a single mosaic (i.e., a collection of individual cubes stored in a base of, for example, 12 rows by 12 columns - see Illustration 48) contains many independent cubes that can be used elsewhere in the project, so the amount of precipitation is zero;
- in connection with the above, mosaics are also priced differently than other tiles - the program takes into account the square meters of the total area covered by the mosaic and converts them into the number of full individual mosaics (sets of cubes) and only these are priced;
- changing any other settings is not required;
- To add the mosaic to the base, click **"Ok"**.

Note: We remind you to save the image of the mosaic with joints as a BMP file.

Note: there is an alternative way to prepare mosaics - when editing a photo you can draw joints also on its edges, but in this situation you should make sure that the joints on the edges are half as narrow as the others (e.g. 2 mm - 2 pixels) and that the program does not add standard joints. To do this, uncheck the "Standard grout" option in the "Adding Tile" window, then select the "Grout edition" button and uncheck ALL edges.

Note: Hexagonal tiles can only be applied in "all over" mode. It is not possible to properly apply them individually.

Note that hexagonal tiles can also be added to the user base on the same basis as mosaics. The illustration opposite shows an example of a hexagonal tile image prepared to be added to the database in the Tile Database Editor(Illustration 49).

Illustration 49 Ggrouts around the hexagonal tile

7. Image properties

To insert a tile preview, select the icon **"Load the picture..."** and in the running window indicate the location of the corresponding file. The tile inserted in the project will have good quality (sharpness) only if the size of its image in pixels is at least equal to the size of the tile in millimetres. If the size of the tile in pixels differs from the size of the tile in millimetres, the program will tell the user to scale the image (Illustration 50).

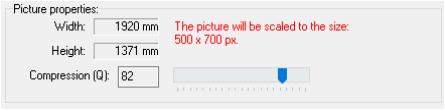


Illustration 50 Picture Properties field"

You can change the image parameters yourself with the icon **"Scales the picture..."** or by using the option **"Compression"** in the **"Picture properties"** field (Illustration 50). Compression is a simplification of the quality of an picture, aimed at reducing its size so that it takes up as little disk space as possible while maintaining high visual quality.

If the picture has been entered in the wrong layout, you can change it using the bump and bounce option: , , and .

8. Finishing work with the "Adding tile" window"

After completing the data and settings in the **"Add Tile"** window and approving them by selecting the **"OK"** button, the tile will be added to the collection, and its preview and name will be displayed in the right part of the Tile Database Editor window. When using program and the Tile Database Editor at the same time, you can use the newly created collection immediately when designing. Simply, while in visualization mode, refresh the base by selecting any manufacturer's base in the **"Collections"** window, and then switch back to **"User database**. This will cause it to be reloaded into the program along with the added new items.

Additional information

1. Instructional videos

- Playlist , "Tiles | Tile Layouts | Tile Base Editor".
- Adding tiles to the User Base
- Adding a hexagonal tile to the User Base based on an available rectangular tile
- Adding a hexagonal tile to the User Base based on a ready-made hexagon shape
- Adding tile layouts - brick
- Placing hexagonal tiles and irregularly shaped tiles in a project
- Rotation of ceramic tiles
- Layouts, expanded tile layout, brickwork
- Layouts, layout with trimmed tile rotated 45º
- Simple layouts, square layout

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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