

## **New features**

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in CAD Decor PRO 4.0, CAD Decor 4.0  
and CAD Kitchens 8.0

## Improved environment in 64 bit version

The new release primarily marks the transition to the new and improved .4CAD (dot4CAD) working environment. It is based on a new version of the IntelliCAD 10.1 engine released by The IntelliCAD Technology Consortium. The upgrade to the 64-bit version means that much larger amounts of data can be processed. The programs will now handle even very large projects, with many millions of surfaces. Processing capabilities are now limited only by the capabilities of the hardware you have, including the graphics card or the amount of RAM you have - with the addition of more RAM you will be able to process even larger projects.

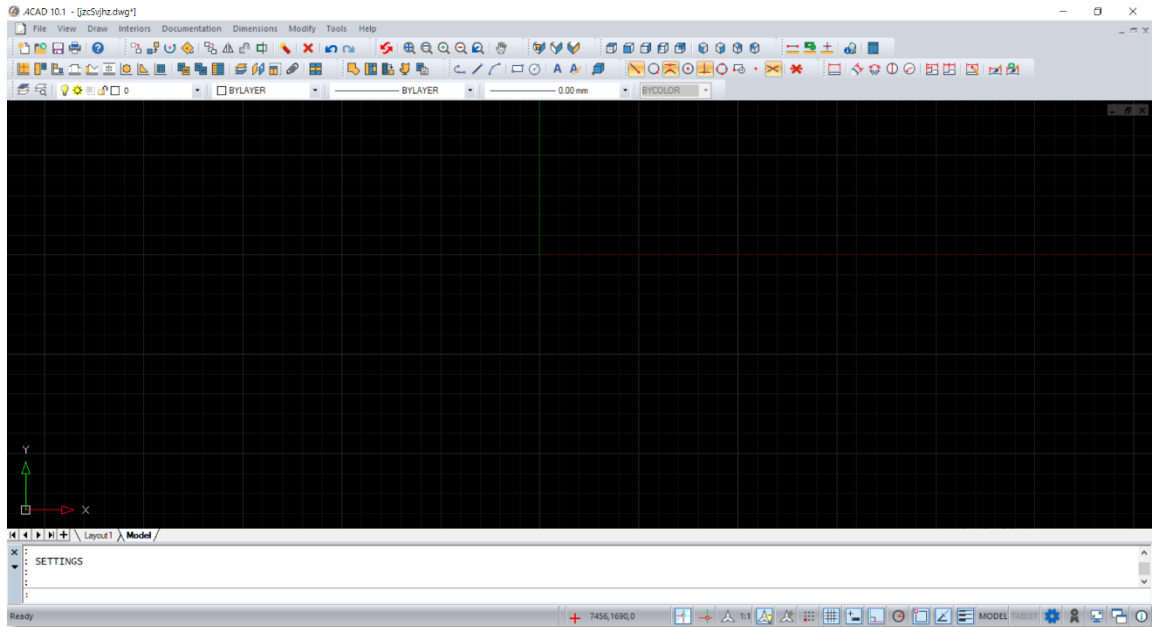


Fig. 1 - Program window with new menu

The new version of the environment includes an improved graphical interface, the clarity of which ensures intuitive work. We have adjusted the menu elements and reorganized their default layout (Fig. 1). All the toolbars and their elements can also be easily found in the menu. The toolbars are divided into similar thematic groups, presenting successive actions in the design process.

The appearance of the environment and the arrangement of toolbars can be customized by the user. A full spectrum of CAD tools is available, including additional drawing editing tools that emerge with the new version of the engine. These can be found in the menu and the toolbars can be customized according to the user's level of advancement. Most of the tools have been customized to resemble as much as possible the existing operations in our program - using them is supposed to be not only convenient, but also intuitive.

Various options, including display options, can be adjusted in the options window. To activate them, type `SETTINGS` (Fig. 2) in the command bar and confirm with `ENTER`. The *Options* window with various tabs will appear on the screen (Fig. 3). The appearance of the window is shown on the screen on the next page.

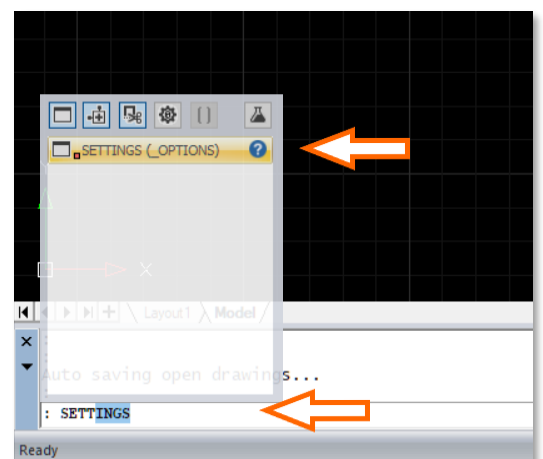


Fig. 2 - SETTINGS command and hint on the command bar

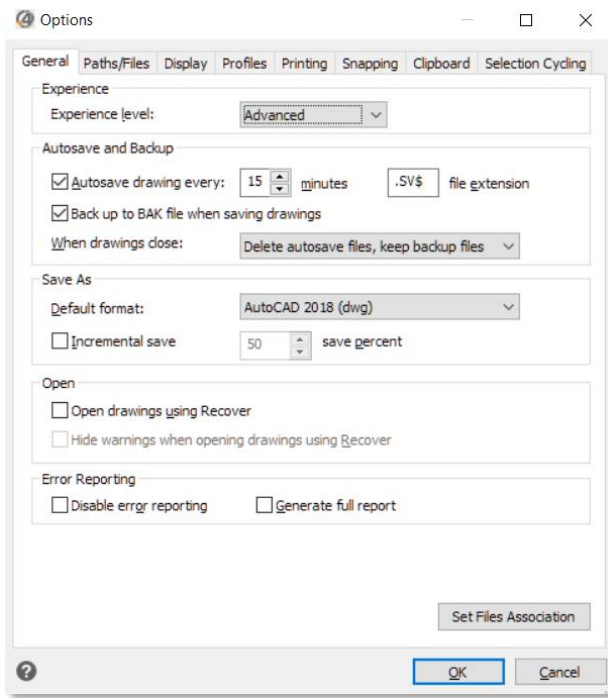


Fig. 3 - Options window with tabs

## New keyboard shortcuts and hints

A change in the operation of some tools in the dot4CAD engine has caused changes in the existing operation of keyboard shortcuts to which our users are accustomed. [In a separate document](#), we present a comparison of keyboard shortcuts and commands that functioned until now, as well as the new operation of shortcuts.

An important advantage of the new environment is the dynamic input function and its associated automatic command suggestion feature. It will certainly be helpful not only in the first hours of work after the update, but during the entire time of working in our programs. When typing a command from the keyboard, the program reads and offers prompts, for example, after typing CI, the program prompts the command CIRCLE, which is drawing a circle (Fig. 4). Note that in the commands displayed for selection, the letters corresponding to the default keyboard shortcuts assigned to the action will be highlighted in blue. This will certainly help familiarize you with the new shortcuts. In addition, the command typed from the keyboard, hints and tips are displayed next to the mouse cursor.

## Navigating the environment

Due to changes in the dot4CAD engine, the way of moving around in the environment has been modified. Until now, when pressing the Left Mouse Button (LPM) and the CTRL key, free rotation of the view in any direction and along any axis was available. Currently, this combination does not trigger any action. In contrast, rotating the view around a central axis was available by selecting the combination of the Right Mouse Button (PPM) and the CTRL key. In the new engine, this combination is responsible for displaying the Entity Snap menu. In the 32 bit version, after using the combination Ctrl + Shift + Right Mouse Button, it was possible to move the view in real time. In the 64 bit version, this combination has no effect.

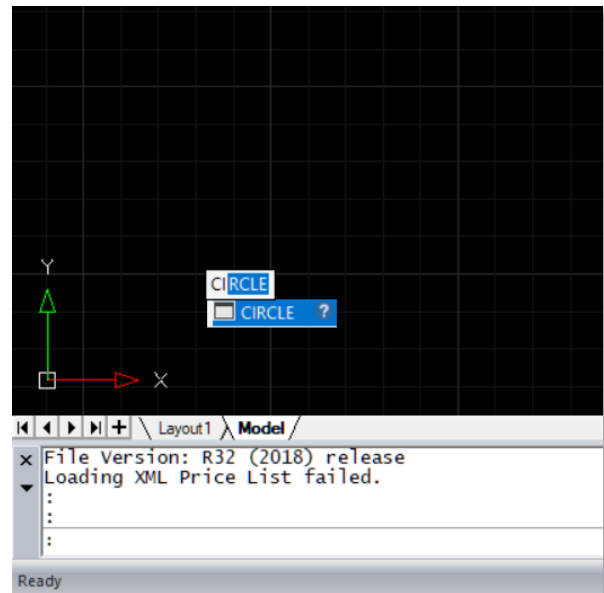


Fig. 4 - Fragment of the program window - entered letters and the CIRCLE command hint

## Other changes in the CAD environment

The first of the other changes in the environment every user will notice already when opening the program. Previously, as soon as the shortcut icon was clicked (on the desktop, in a folder or in the Start menu), the system loaded the program window with the loading screen, effectively interrupting other activities performed on the computer. In the new version of CAD Projekt K&A's programs, while the program is loading, we can finish the activities performed in other applications, since the loading of individual program elements can be done in the background. A simple dot4CAD (.4CAD) window is visible on the screen, with a loading progress bar at the bottom.

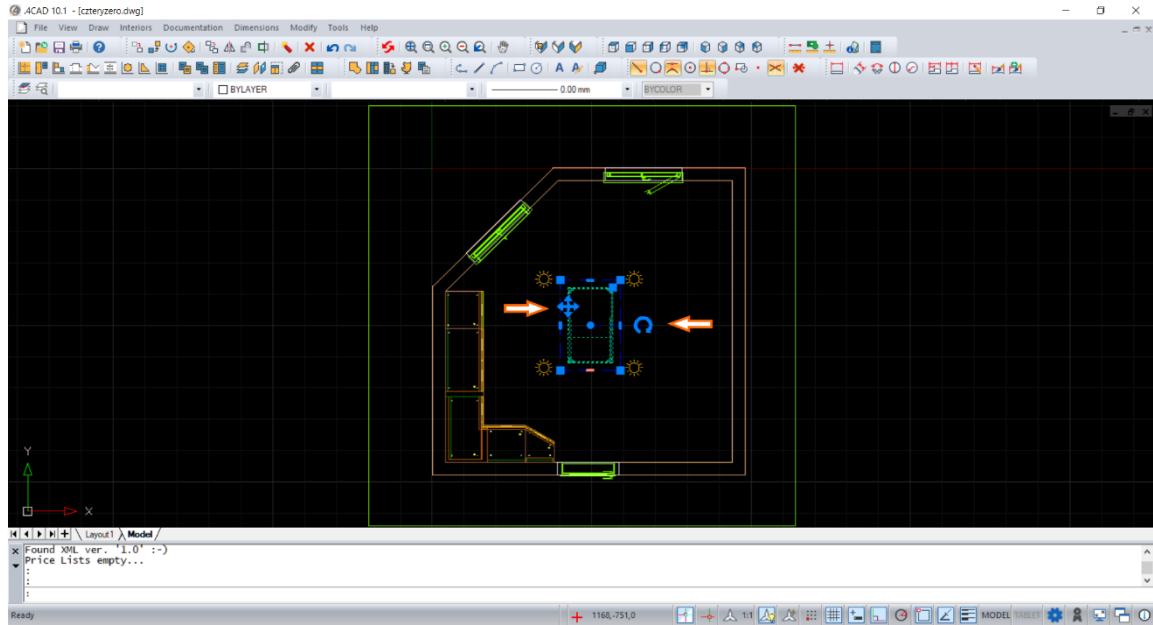


Fig. 5 - Selected object and transformation controls

The new version of the dot4CAD (.4CAD) environment allows you to perform transformations related to inserted objects in a more convenient way than before. After inserting any object, you can select it with an LPM click. A blue border will appear around the object and the transformation controls will be displayed (Fig. 5). Using them you can rotate the object, move it or scale it. By clicking and holding one of the corners of the border, you can scale the object proportionally. On the other hand, by clicking on the bold segment on one of the sides of the selection (Fig. 6) you can scale the object disproportionately, only in the selected dimension.

### NOTE

Scaling will not change the dimensions of the object stored in the additive database or in the documentation. It is only a cosmetic change regarding the appearance in the design.

Another noteworthy change is the optimization and acceleration of attraction point operations. In the 64-bit version, the program recognizes snap points faster and more accurately, allowing for precise work. This happens even with a very dense mesh with a large number of vertices.

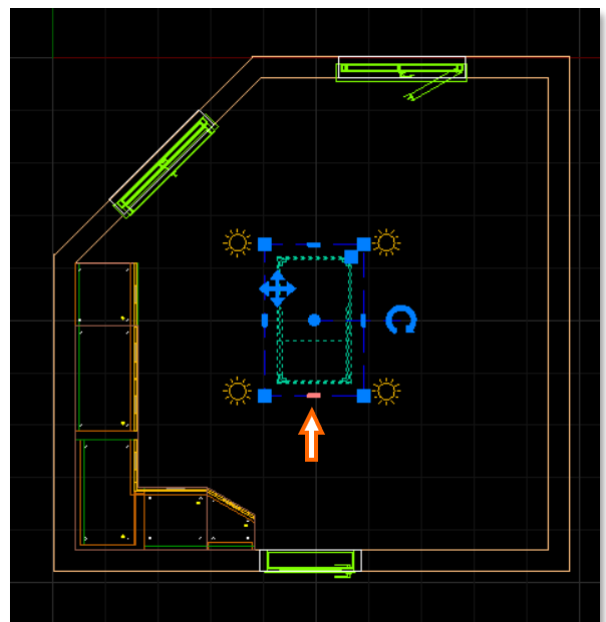


Fig. 6 - Starting point of non-proportional scaling

# Doors and Windows Module

Along with the new version, we present our users the long-awaited new Doors and Windows Module. It can be accessed by clicking on the second icon from the left on the taskbar of Interior 1 (Fig. 7).



Fig. 7 - The Interior 1 bar with the icon of the Doors and Windows module highlighted.

When you click on the icon shown above, the module window will open across the width of the screen. Its appearance is shown in the graphic below (Fig. 8).

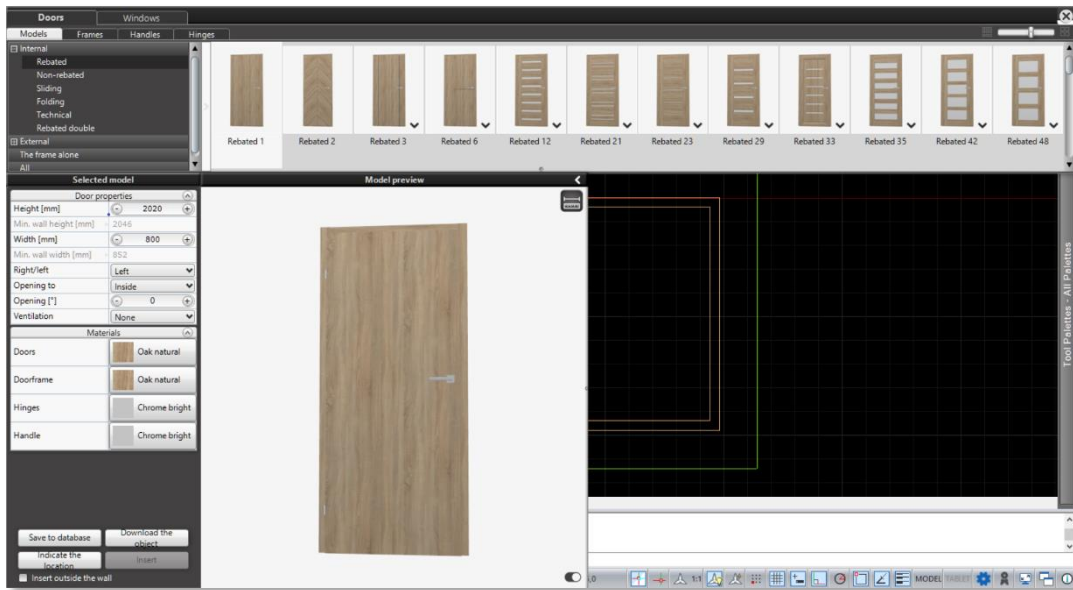


Fig. 8 - Window of the Doors and Windows module

The module window is divided into two main tabs: Doors and Windows. In both tabs, the upper panel shows previews of models (and groups of models) divided into categories. The lower part of the window contains information about the selected model and its 3D preview. In the module there are default comprehensive databases of window and door models. These models can be further modified.

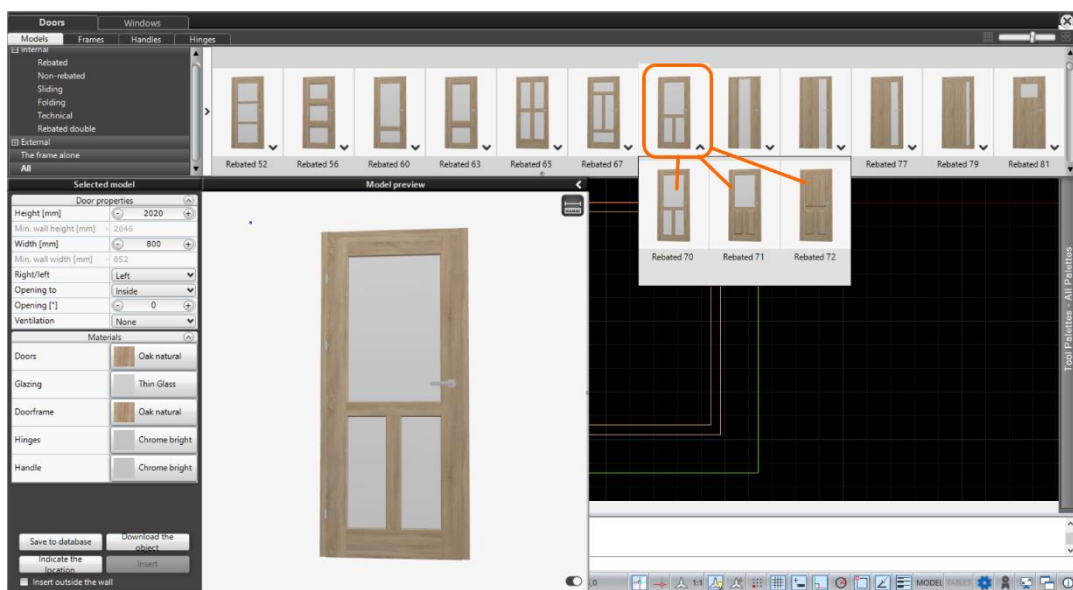


Fig. 9 - Group containing variants of one model

Door models are divided into categories of *Interior*, *Exterior* and *Frame alone* without door leaf. Among the interior door models, you will find rebated, non-rebated, sliding, folding, technical and rebated double doors. Among the models of exterior doors

we can find single and double doors. In terms of the material used, we can separate wooden, metal and glass doors. Searching for the desired model (doors, but also windows) can be made easier by using tags - a drop-down panel on the right side of the category tree is used for this purpose, for example, ventilation will be added to doors with the *Undercut* tag.

Door models in categories and subcategories are grouped by different versions (Fig. 9) – they differ, among other things, in the presence of glazing and the number of inserted glass panels. After selecting a model, it can be further modified. You can adjust such elements of the door as the type of handle, hinges, the presence or absence of a lock, the type of frame, and in some models you can add ventilation by choosing from a selection of proposals.

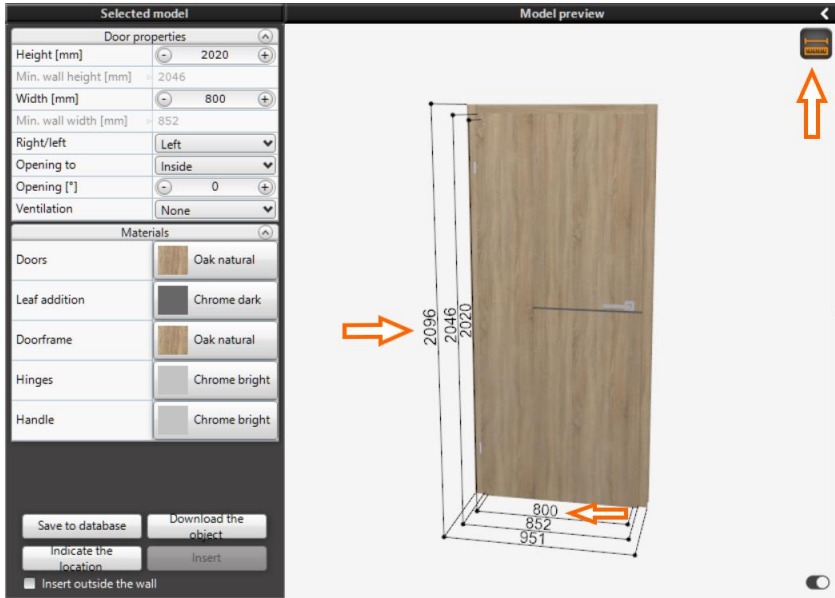


Fig. 10 - Dimensions of the model

**NOTE**

The parameter "Opening [\*]" specifies the degree of opening of the door or window. In the case of swinging doors, it indicates the opening angle, and in the case of folding and sliding doors, it indicates the opening percentage. For windows, the parameters "Flush opening [\*]" and "Tilt opening [\*]" appear in the Window Properties only after clicking on the selected sash in the model preview.

In the panel on the left under *Door Properties*, you can specify the opening method (outward / inward), the position of the hinges (right / left), as well as decide whether the door model inserted in the project is to be open or closed.

In the door model preview window, you can select the "Object Dimensions" icon in the upper right corner (Fig. 10), to see the actual dimensions of the selected door with the frame - largest dimension - and the opening in the wall - smallest dimension. The dimensions given in the tab on the left are for the size of the door.

In the *Materials* tab, you can at this stage specify what materials you want the door to be made of. Here you can select materials for individual door components and see how they will blend in with the whole thanks to the real-time model preview window.

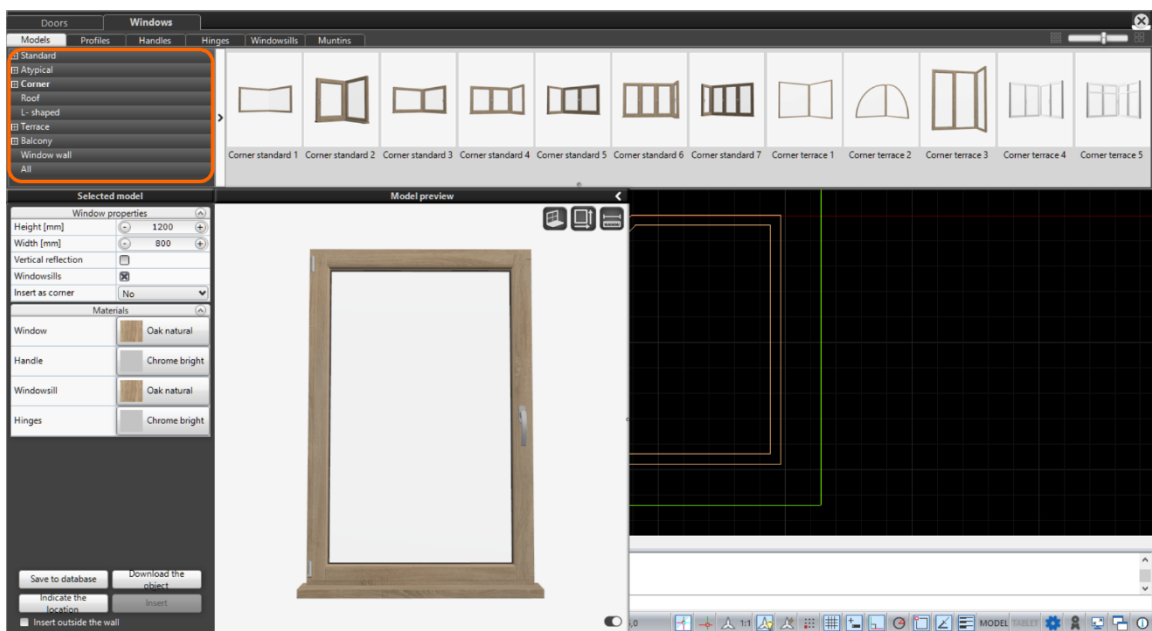


Fig. 11 - Windows tab with selected categories

The window models available in the universal database are also divided into categories and subcategories (Fig. 11). The windows are divided into *Standard*, *Atypical*, *Corner*, *Roof*, *L-shaped*, *Terrace*, *Balcony* and *Window wall*. In most categories, windows are divided into single-leaf, double-leaf and multi-leaf, in the case of terrace windows, a subcategory of atypical terrace windows has also been added. Corner windows are divided into corner and terrace windows. Additional information is that windows from other categories can be inserted as corner windows, after selecting the appropriate option in Properties section of the selected model (Fig. 12).

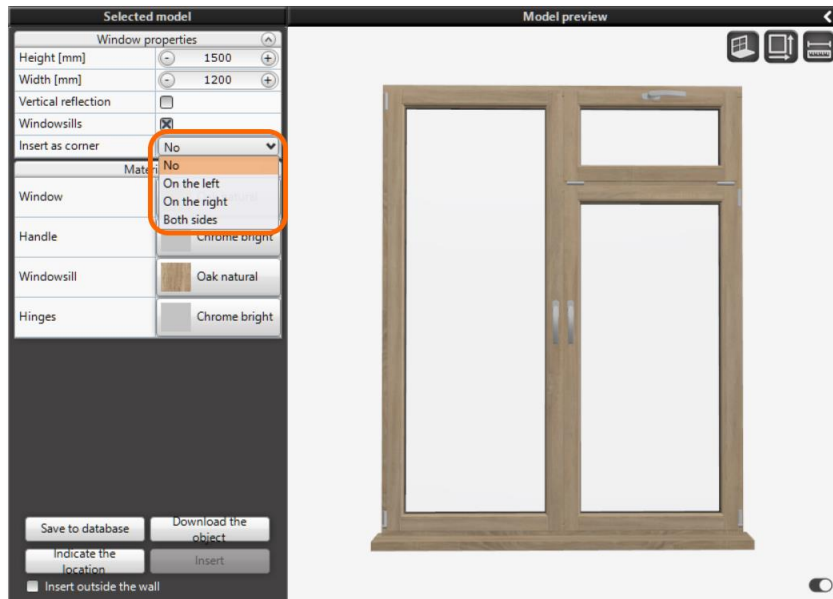


Fig. 12 - Option to insert a window as a corner window in Window Properties

Once the window model is selected, it can be further modified. To edit an item, click on it in the model preview window, only then will the corresponding tab appear in the *Selected Model* panel. You can adjust such elements as the presence and properties of the window sill, the profile of the window, the type of hinges, handles, as well as the presence, type and size of muntins. Since the window models in the database are parametric windows, they can also be scaled in any dimension. This is done using the "Custom scaling" icon in the upper right corner of the *Model preview* window (Fig. 13). Each of the window wings can also be designated as a *Fixed Window*, that is, a window without the possibility of opening. Similar to doors, in the panel on the left side of the window in the *Window Properties* and *Materials* tabs, you can adjust the parameters of the model according to your requirements.

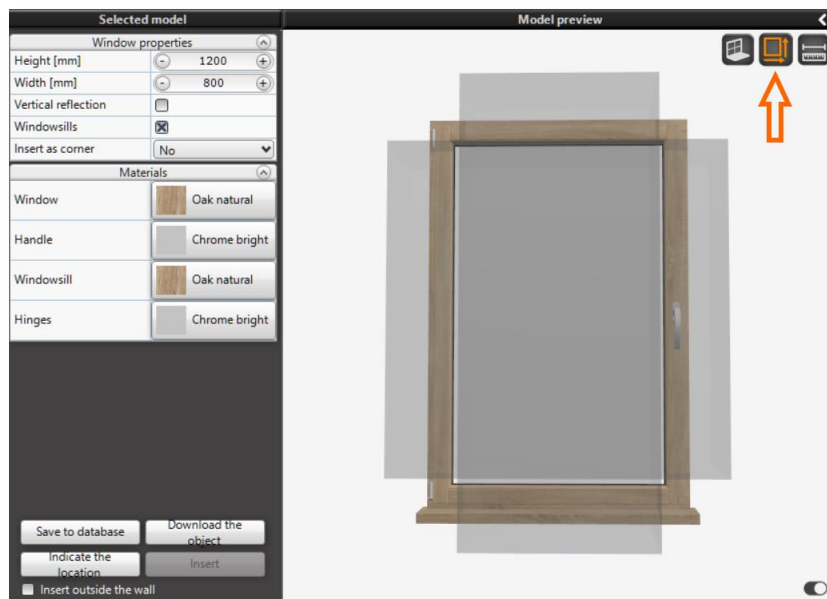


Fig. 13 - Non-standard window scaling

A new feature in the module is the ability to insert windows one next to the other. During insertion, a new window is attracted to an existing window in the project, so you can arrange windows without any gap between them. This allows the user to create from existing models the exact window layout he needs.

For both windows and doors, it is possible to insert the model outside the wall. To do this, select the "Insert outside the wall" checkbox at the bottom of the left panel. This function allows you to place the object in the design as desired. Note - when using this function, the hole in the wall is not cut out.

An important feature is the ability to save the finished model to a user base. Once you have customized the door or window model to suit your needs, you can save it for use in future projects.

## Changes in Documentation

Some changes with the new version will also be made to the Documentation module. The first and most important of these is the deactivation, for new projects, of the oldest version of documentation. With the 64 bit version, only the Documentation introduced with version 3.X / 7.X of our programs will be available for use.

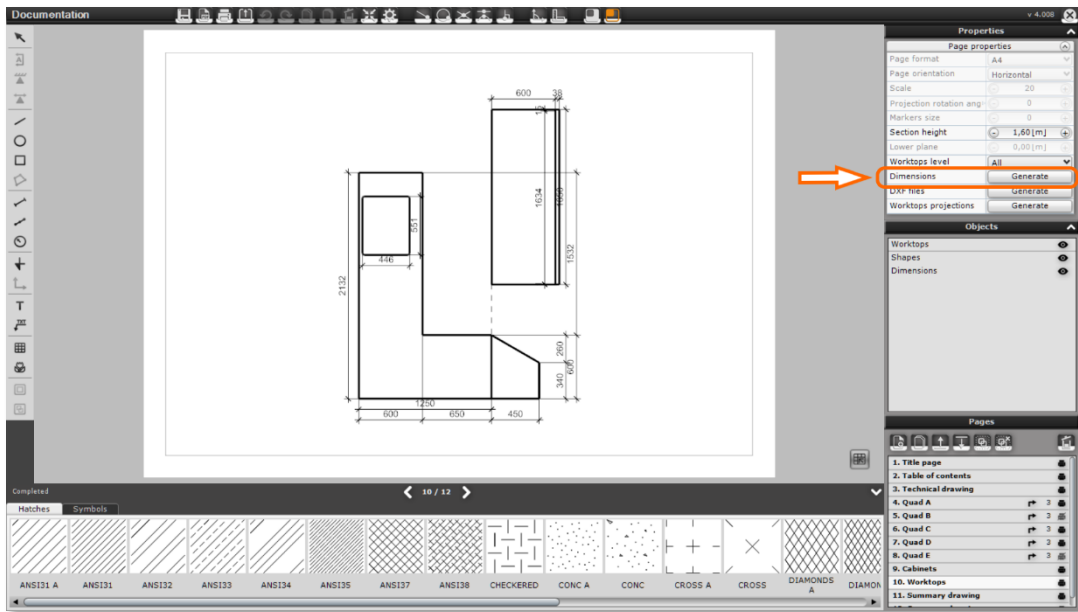


Fig. 14 - Dimensioning the worktops on the Worktops page

We have introduced a change in worktop dimensioning. Until now this option was only available for worktop projection pages, now the option to autogenerate worktop dimensions will also appear on the "Worktops" page (Fig. 14). Worktop joints are also displayed.

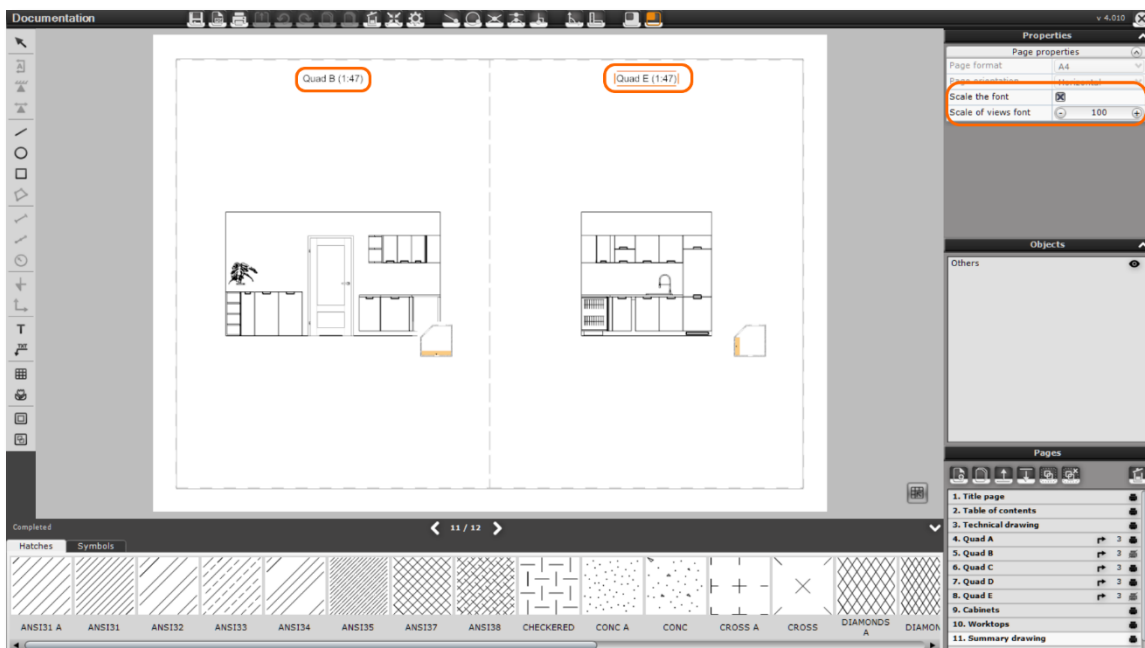


Fig. 15 - Information about the scale of drawings and selected scaling options



Another new feature is the ability to copy a created wall projection. You will be able to copy the drawing along with captions and other applied elements. The duplicated wall projection will be added with a new name.

We have also made changes regarding the display of text. Scale information and the ability to scale the font have been added to the summary drawings - the scale information is displayed on each view of the summary drawing, in addition, a checkbox "Scale the font" has been added in the properties, which scales the caption previews on the summary drawing (Fig. 15), but does not interfere with the captions of the original drawings in it.

Working with the table creator has been improved. A table can be saved as a regular table, a design table, or both at the same time. We have made it possible to edit the background color, border and font in tables, so that table templates can be used more widely. For example, tables saved in the wizard can be used as a bank of templates (tables and texts) that the user will have access to from any project.

In addition, when working with documentation, the ability to use the *Perpendicular* attraction point when drawing has been added, as well as enabling the use of guides when adding symbols. The visibility of the guides can be turned on or off by selecting the appropriate option in *Object Properties*.

## Changes in Visualization



Fig. 16 – Save the project icon



Fig. 17 - Save the visualisation icon



Fig. 18 - "Save the visualisation as..." icon

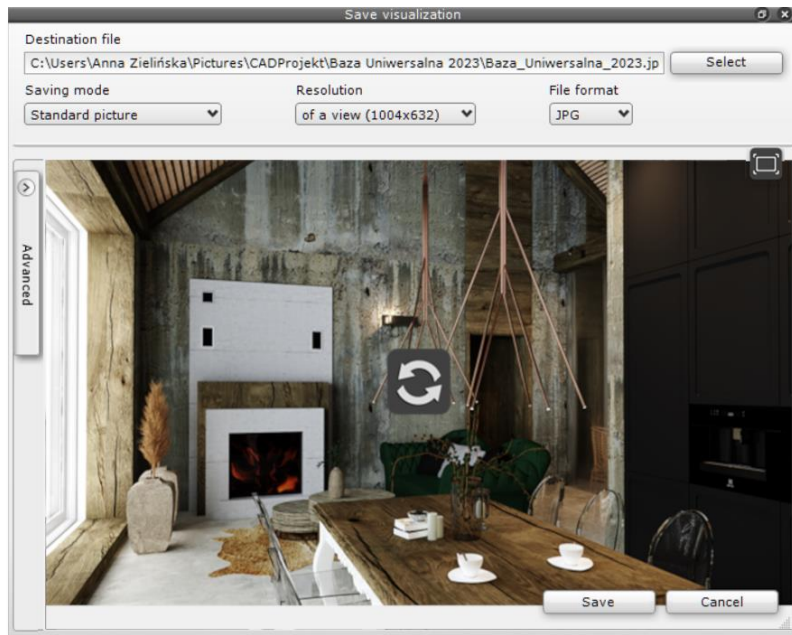


Fig. 19 - "Save visualization" window

In the new version of the programs, further improvements have been made to the visualization module. In order to meet the expectations of users, we added a button to save the project. In connection with this option, the role of the existing "Quick Save" icon has been changed (Fig. 16). From now on, this symbol, located as the first icon on the left in the top menu of visualization, stands for "Save the project" (shortcut CTRL+S). Use the two modified save icons in the center of the top menu to save the visualization image to your computer. Icon on the left side (Fig. 17) is used to quickly save an image to a predetermined folder, while the icon on the right (Fig. 18) stands for "Save Visualization As" function. After clicking it, the *Save Visualization* window opens (Fig. 19), in which you can select the folder and options for saving images.

With the introduction of the new Doors and Windows module and the addition of the ability to open windows, a change has been made in the functioning of window emitters. In the 3.X / 7.X version, the role of the emitter was performed in the glass windows. As of version 4.0 / 8.0, since the window wings can be opened or tilted, glazing can no longer act as a light source for the

entire window. Therefore, in the construction of the window models, the *Emitter* layer was added as a rectangle behind the window, on the outside. It can be found by selecting the selected window on the right panel in the *Material Properties* tab, in the *Selected* section (Fig. 20). It has a material setting of 100% transparency and 9% glow and emission. In addition, on the left panel in the *Lights* tab, in the section *Luminescent surfaces*, "Window Emitters" was separated from all emitters as a separate category to improve the work with these light sources. The "Window Emitters" item will not disappear from the lights tab even if you temporarily turn off the emission/illumination.

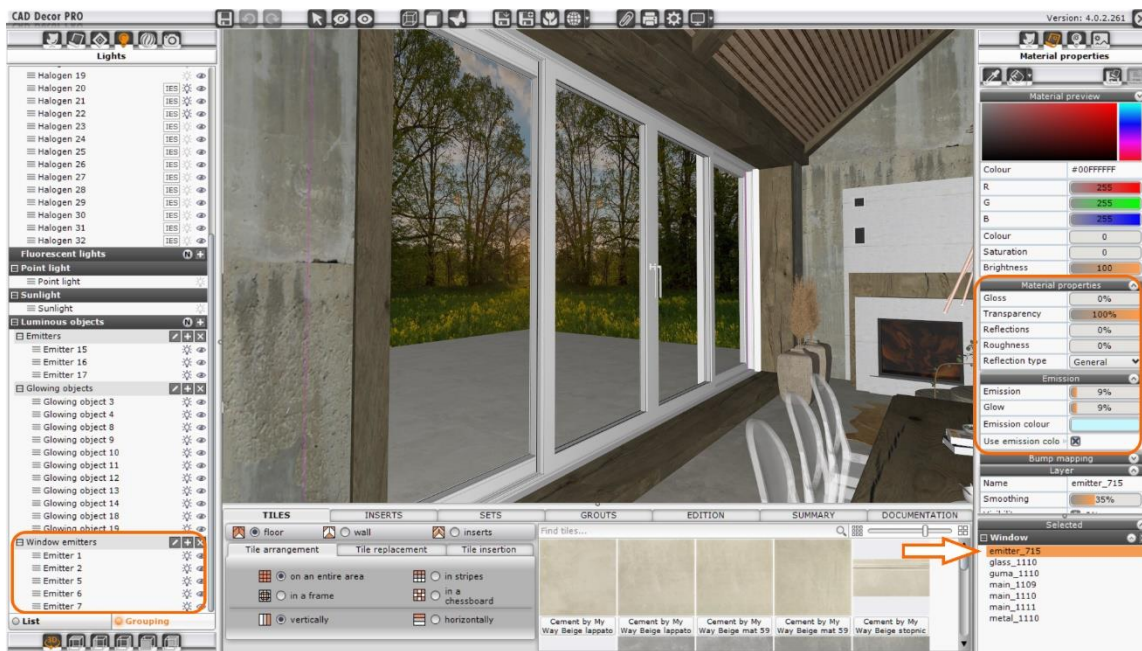


Fig. 20 - Window emitters and their properties

To meet expectations, we have implemented the ability to save your own parameters for ceramic tiles. Once the selected tiles have been applied to the area, you can proceed to edit them. On the right panel in the *Material Properties* tab, you can adjust the parameters: gloss, roughness, reflections and bump effect. After changing tile properties, you can save them using the "Save changed tile properties" icon at the top of the right panel (Fig. 21). The change of parameters applies to all faces of a given tile. The parameters saved by the user for a given tile will remain in the program even after updating the manufacturer's database. It is also possible to restore the default properties of the tile. This is done by another new icon in the right panel - "Restore default tile properties from base". We have also added options for restoring tile properties in the *Global Settings* window in a new tab (Fig. 22). There you can restore the default properties of the tile from the selected base or for all your bases.

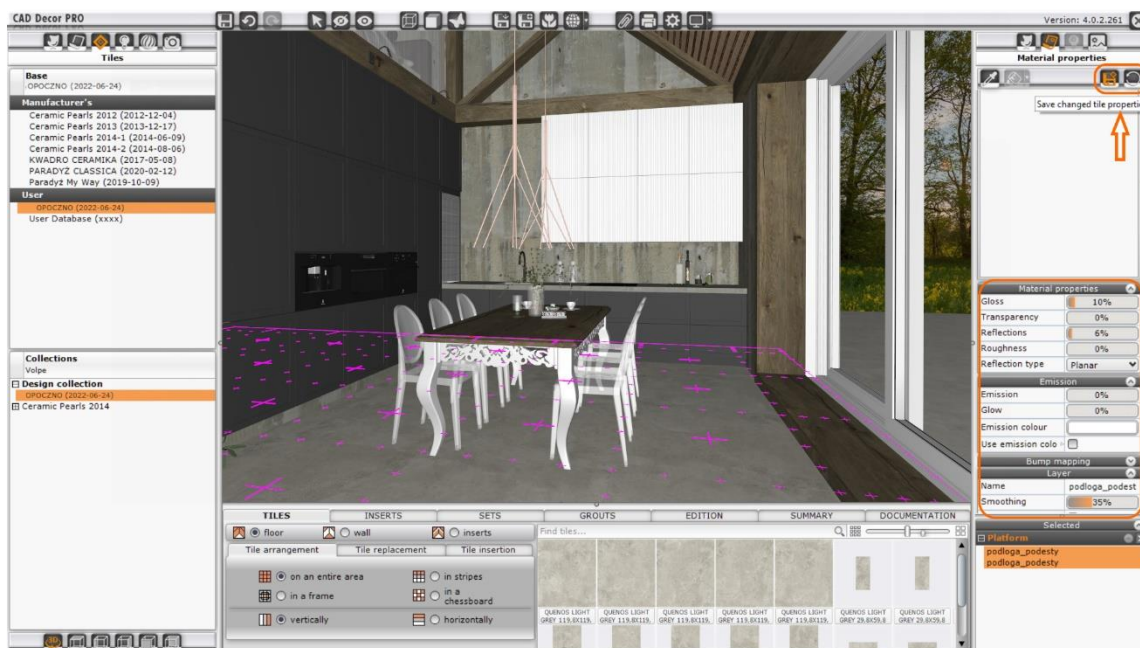


Fig. 21 - Edit tiles parameters and highlighted save and restore icons

Another expected feature is the ability to adjust the texture distribution on objects with a defined UV mesh. The texture can also be scaled properly.

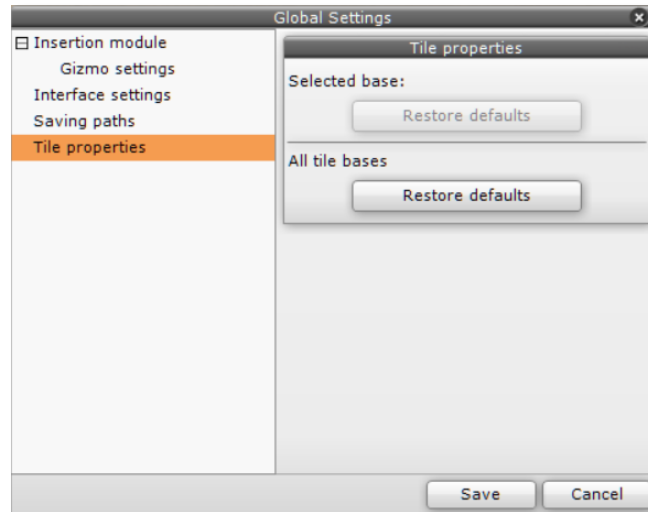


Fig. 22 - Tile Properties tab in Settings

A function has been introduced for adding materials and textures to the scene for the floor using the area separation tool. It works the same way as adding tiles, i.e. by drag and drop.

## Other changes

Due to changes in the CAD environment, the operation of the **Draw Walls** function in the *Walls* module has been modified. The function now uses the Polyline tool, so when drawing the wall outline, you can use most of the options available for this tool. The guide line display also works differently when drawing walls. Previously, the line appeared automatically when the drawn segment reached the length of the opposite wall. Now, to display a line to help draw walls of the same length, hover the cursor over the vertex to which you want to align the drawn segment of the polyline for a few seconds – then a guide line will appear indicating the reference point. The drawn section of the polyline should be stretched to this guide line.

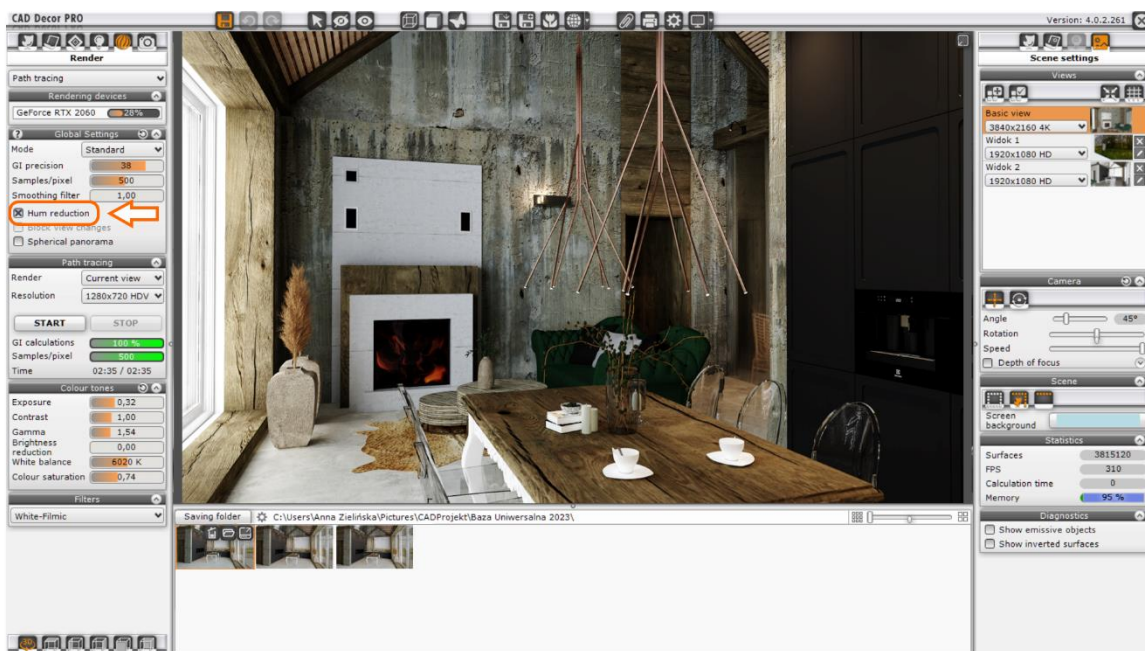


Fig. 23 - Hum reduction option in the Render Pro panel

The way hum reduction works during rendering has been changed - the option is now available as a checkbox (Fig. 23), so you can turn it on or off, depending on your preference. Checking the "box"/checkbox means that the mechanism is enabled. It can be

run both before and after rendering. Turning it on/off after rendering automatically applies hum reduction to the rendered output without recalculation.

In addition, the hum reduction algorithm has been changed and improved compared to the previous version of the program. Using hum reduction in the vast majority of rendered scenes no longer affects the quality of textures used in the scene.

The project autosave mechanism has been improved. Thanks to the introduced solutions, the process has been accelerated and now takes less time - working in the program is therefore smoother.