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1 INTRODUCTION

1.1 GENERAL

The 'Room Data Sheets' plug-in for calculating areas and quantities enables the depiction of quantities and areas in 2D and 3D views, and includes functions for creating reports according to two different living space calculation types.


The following data or evaluations are provided for use in room data sheets:

- Floor area
- Living space
- Net floor area < 1,5 m
- Net floor area > 1,5 m
- Total net floor area
- Room volume
- Net cubic capacity

In addition, the data specified can be produced for the following construction elements:

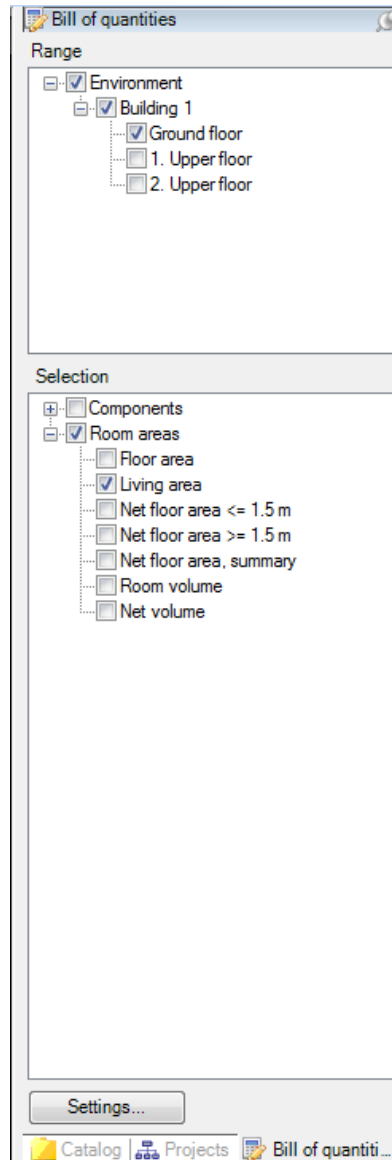
- Floors: Floor area and volume
- Walls: Footprint, skin-surface area and volume
- Ceilings: Ceiling area and volume
- Chimneys: Footprint, skin-surface area and volume
- Pillars: Footprint, skin-surface area and volume

2 CALCULATING QUANTITIES

Quantity calculation is activated by a left mouse-click on the tab labelled **Quantities**  located in the same window as the catalog and the project manager.



2.1 USER INTERFACE

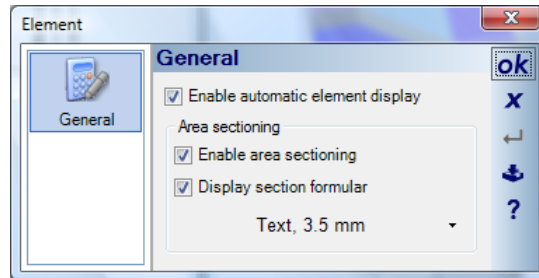


The user interface consists of two tree views; **Range** and **Selection**. The required range, construction elements, and quantities are activated and deactivated using the check boxes of the tree.

Visualisations can be produced for buildings, floors or individual apartments. The visibility of deactivated objects remains unchanged.

The **Selection** tree view can be used to select elements which are to be displayed within the selected range.

2.2 SETTINGS



If the option for ‘Enable automatic element display‘ is activated, then quantities and construction elements that have not been selected appear transparent or are invisible, otherwise they will also be displayed normally.

In the section for ‘Area sectioning’ you can specify whether or not areas should be divided into sub-areas. If so, areas are divided up according to the formula for segmentation and are shown in different colours.

The formulas used for segmentation can also be displayed and their text properties modified if necessary.

2.3 REPRESENTATION

2.3.1 Construction Elements in the 3D View

Quantities are represented by different colours in the 3D view. The actual representation of a quantity is shown below using walls as an example.



Normal View

Volume

Surface shell

Contact area

2.3.2 Room Data in the 3D View

Quantities for room data sheets are represented as follows (the roof is set as invisible in the example):



Normal View	Floor Area	Living Space	Net Floor area < 1,5 m	Net Floor area > 1,5m	Total Net Floor Area	Room Volume/ Net Cubic Capacity
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2.3.3 *Sub-areas in the 3D View*

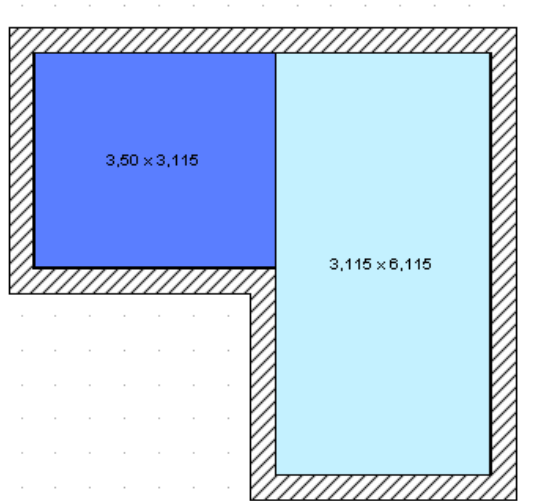
Sub-areas are shown without a formula in the 3D view.



2.3.4 2D View

Only floor areas, optionally including a formula, are displayed in the 2D view.

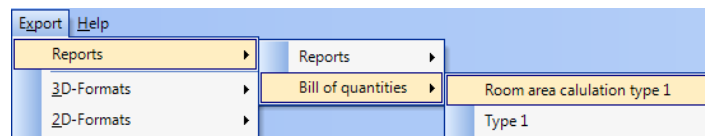
Representation of room areas:



3 EXPORTING ROOM DATA SHEETS

Quantity calculation also offers the possibility to create room data sheets for the definition of living space according to the living space calculation, and the calculation of room areas according to DIN 277.

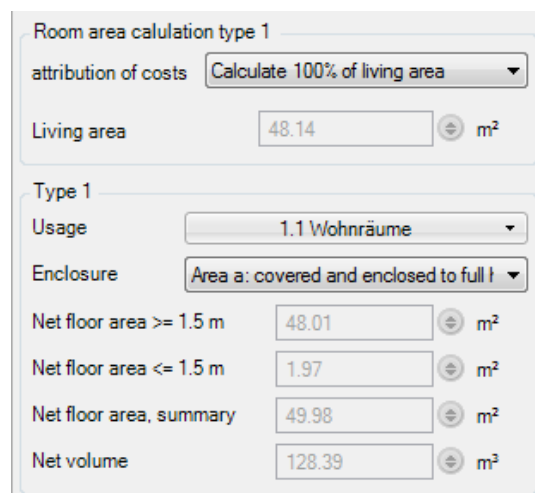
This function is started over the menu **Export > Reports > Bill of Quantities**.



3.1 CALCULATING AREAS ACCORDING TO DIN 277

For the calculation of areas according to DIN 277 it is possible to specify individual settings for each room.

This is done by activating the properties dialog for the room (via a double-click on the room) and subsequently selecting the section for **Calculation**.

A screenshot of a properties dialog box titled 'Room area calculation type 1'. It contains several fields and dropdown menus. The 'attribution of costs' dropdown is set to 'Calculate 100% of living area'. The 'Living area' field shows '48.14 m²'. The 'Type 1' section has a 'Usage' dropdown set to '1.1 Wohnräume' and an 'Enclosure' dropdown set to 'Area a: covered and enclosed to full t'. Below this are four more fields: 'Net floor area >= 1.5 m' (48.01 m²), 'Net floor area <= 1.5 m' (1.97 m²), 'Net floor area, summary' (49.98 m²), and 'Net volume' (128.39 m³).

The following settings can now be specified:

Usage: The usage of the room according to DIN277 can be selected here.

Enclosure: Here the enclosure of the room according to DIN277 can be specified.

- Area a: Covered and enclosed on all sides to the full height.
- Area b: Covered, but not enclosed on all sides to the full height.
- Area c: Not covered.

3.1.1 *Export*

After activating the function to export room data sheets over the 'Export' menu, the properties dialog appears:

The following settings can be specified here.

General properties for export can be specified in the **Export** section.

Template File: Here a file can be selected which is to be used as a template. The file *DIN277.lst*, which is located in the *Templates* directory of the catalog, is set by default for the calculation of room cubic capacity according to DIN 277.

If a different template file is used, it is important that this template file was created with data for DIN 277 room data sheets, as other templates are not compatible. To create a suitable template the 'Designer' must be started by clicking on **Edit template**. Further information can be obtained using the help-function of the 'Designer'.

If the option for **Display export file** is selected, the export file will be displayed after it has been created, provided a suitable Program (e.g. the Acrobat Reader for a PDF-file) is available in the system.

A click on **Edit template** starts the 'Designer', with which the selected template file can be edited or a new template created.

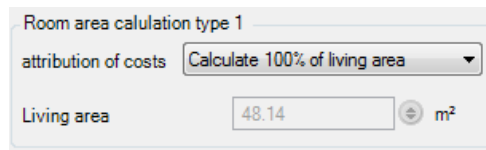
The tree view for **selection** shows a list of all buildings included in the project with their floors and rooms, which can be selected or excluded for export.

A click on 'ok' confirms the export settings.

3.2 DETERMINING LIVING SPACE ACCORDING TO THE LIVING SPACE CALCULATION

For determining living space according to the living space calculation, it is possible to specify for each room to what extent it should be considered in the calculation.

This is done by activating the properties dialog for the room (via a double-click on the room) and subsequently selecting the section for **Room area calculation type 1**.



Room area calculation type 1

attribution of costs Calculate 100% of living area

Living area 48.14 m²

Under **Room area calculation type 1** the ‘Attribution of costs’ of the room can now be specified. In compliance with the Living Space calculation one of the following options can be selected:

- Living space, include to 100%
- Living space, include to 50%
- Living space, include to 25%
- Technical systems space, not included

3.2.1 *Export*

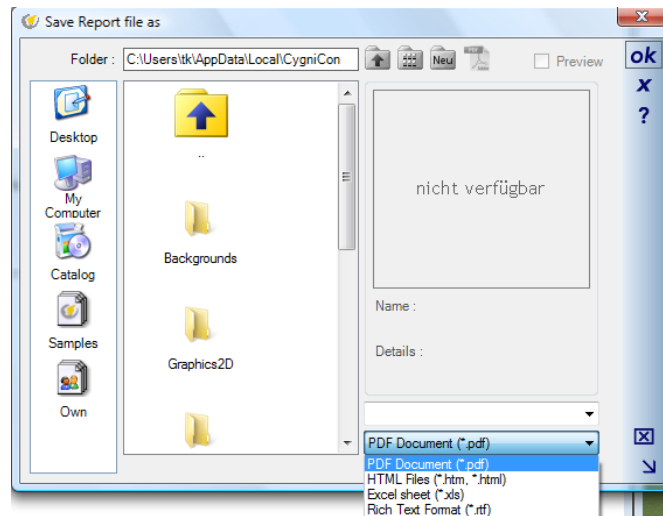
After activating the function to export room data sheets for the ‘Living Space Ordinance’ over the ‘Export’ menu, the export properties dialog appears:

The settings under **Export** correspond, except for the template file, to those for ‘DIN 277’ export. The file *WoFIV.lst*, which is located in the *Templates* directory of the catalog, is set by default for the calculation of living space.

The tree view for **Scope/Auswahl** shows a list of all buildings included in the project with their rooms sorted by apartment. Rooms that are not allocated to an apartment are listed at the end, and are exported separately.

3.3 SELECTING FILE NAME AND EXPORT FORMAT

A click on ‘ok’ confirms the export settings and a save dialog appears, in which the file name and export format can be specified.



Following file formats are available:

- **PDF**(Portable Document Format) is the standard format for documents and can be displayed with freeware programs such as the Acrobat Reader.
- **HTML**
- **XLS** (Microsoft Excel)
- **RTF** (Rich Text Format)

Pressing the 'Enter' key or a click on 'ok' confirms the settings and the file is created. If the appropriate option is set, the file is also opened and displayed.