Allplan 2014
Quantities
Manual

Integrated solutions
for the construction industry

This documentation has been produced with the utmost care.

Nemetschek Allplan Systems GmbH and the program authors have no liability to the purchaser or any other entity, with respect to any liability, loss, or damage caused, directly or indirectly by this software, including but not limited to, any interruptions of service, loss of business, anticipatory profits, or consequential damages resulting from the use or operation of this software. In the event of discrepancies between the descriptions and the program, the menu and program lines displayed by the program take precedence.

Information in this documentation is subject to change without notice. Companies, names and data used in examples are fictitious unless otherwise noted. No part of this documentation may be reproduced or transmitted in any form or by means, electronic or mechanical, for any purpose, without the express written permission of Nemetschek Allplan Systems GmbH.

Version: October 2013.

Document No. 160eng02m02–1–DM1013

Welcome!

Welcome to **Allplan Building Cost Management**, Nemetschek's integrated program for tendering, awarding and invoicing.

Thank you for choosing Allplan Quantities, which allows you to prepare detailed specifications and building descriptions quickly, easily and in a transparent manner. This way, you can immediately see how cost and quality interact.

Allplan Quantities assists you in calculating building costs based on the conventional or advanced element method. A comprehensive element catalog complete with the latest building prices is already included in Allplan Quantities for your convenience.

Integrated interfaces ensure that you can easily import predefined data as well as exchange data with Nemetschek's Allplan CAD system and other tender, contracting and costing products.

With the "DIN 276" option, you can also analyze and evaluate your project data based on DIN 276-compliant cost groups.

We wish you fun and success with Allplan Quantities!

Your Allplan BCM Team
Nemetschek Allplan Systems GmbH, Munich

Contents

General Information

This chapter provides detailed information on:

- The system requirements the computer must meet to ensure proper operation of Allplan BCM
- The sources of information provided by the Allplan BCM user documentation and other media
- The contents of this manual
- The basic terminology, conventions and abbreviations used in the Allplan BCM user documentation
- What to do if you need assistance

Allplan Quantities System Requirements

The requirements for running Allplan Quantities are basically the same as for any of the Microsoft Windows versions listed in the table below.

If your computer is running smoothly under one of these Windows versions, you will have no problems installing and working with Allplan Quantities.

Basic rule: The higher the hardware performance, the more effectively you can use Allplan Quantities!

Allplan Quantities requires the following minimum system configuration:

System component ...	**recommended ...**
Processor	**Intel Core 2** (or compatible)
RAM	**2 GB**
Hard disk space	**5 GB**
Screen resolution	**1280 x 1024**
Network card (for networked workstations)	**100 MBit/s**
Software (standard)	**Windows 8** or **Windows 7, SP 1** or **Windows Vista, SP 2**
Software (terminal server)	**Windows Server 2012** or **Windows Server 2008 R2, SP 1**

The Allplan Quantities Documentation

The Allplan Quantities documentation consists of the online documentation (manual in PDF format) and the online help.

You can use either component to become familiar with Allplan Quantities. Choose the one that suits you best.

Online documentation

The online documentation consists of a set of manuals in PDF format. In contrast to printed manuals, these "electronic manuals" offer the advantage that you can access the complete contents of the user documentation for Allplan Quantities straight from your workstation anytime.

You can open the online documentation in two ways: either by clicking **Manuals** on the program's **Help** menu or straight from the Allplan DVD by selecting **Documentation** in the **DVD Content** column and clicking **Allplan BCM**). Whichever method you choose, you need Adobe Acrobat Reader to open the files.

This manual is designed to give you a quick and practical introduction to Allplan Quantities. Therefore, it conveys the essentials in a compact form. As the key focus of this manual is on the basics, the individual topics are outlined only briefly. Solutions for specific problems and descriptions of the settings and parameters can be found in the online help.

Online help

Allplan Quantities provides an extensive online help system covering the entire range of modules and functions in the program. While you work with Allplan Quantities, you can get help on the current function or situation by pressing the F1 KEY or activate **Contents and index** on the **Help** menu and point to the icon on which you require help.

The Help window shows information on commands, detailed step-by-step instructions for all the tools, information on basic concepts and terms and much more.

The index provides a convenient way of looking up topics on which you require help. In addition, you can use the integrated search tool to quickly find related Help topics.

The quickest and easiest way to get started with Allplan Quantities is **Easy2Learn**. This quick guide outlines the most important steps in each tendering and cost calculation phase on a separate help page. All you have to do is ...

... push the F1-Button!

Terminology

The table below provides explanations for the main terms used in the documentation. As these terms describe important operations, it is essential that you are familiar with these expressions in order to work with the software.

Expression	Meaning
ALT KEY	The Alt key on the keyboard. For controlling special functions, this key is used in combination with other keys.
Activate	You activate/deactivate an option by clicking its check box. Activated options are indicated by check marks.
Select	You select a function by opening a menu and clicking a command. You can also open a menu or select a command/option by pressing the ALT key and the underlined letter of the menu/command.
PAGE UP KEY	You use the "Page ↑" key on the keyboard to control the section displayed on screen.
PAGE DOWN KEY	You use the "Page ↓" key on the keyboard to control the section displayed on screen.
Data field	Fields provided for entering data into the data sheets.
Double-click	Point to an icon, menu or command and quickly push the left mouse button twice.
Insertion marker	Vertical, blinking bar indicating the point where the program expects you to make an entry.
ENTER	The ENTER key on the keyboard. In some cases, you need to press this key in order to confirm your entries.
DEL KEY	The Del key on the keyboard. If no characters are selected, pressing this key deletes the character to the right of the insertion marker. If characters are selected, pressing this key deletes these characters.

Expression	Meaning
ESC KEY	The Esc key on the keyboard is usually used to cancel a function or command without performing the relevant operation.
Click	Point to an icon, menu or command and quickly push the left mouse button.
Mark	Drag the cursor over several elements (e.g. a number of letters or words) or double-click an element. In the case of menus or list boxes, elements are marked by clicking.
ARROW KEYS	The arrow keys on the keyboard. Small arrows and the names of the keys (LEFT, RIGHT, UP, DOWN) indicate the direction of movement.
Button	A switch, button or icon (usually denoted by a symbol or text) displayed in a dialog box. Clicking a button executes a command.
CTRL KEY	The Ctrl key on the keyboard. For controlling special functions, this key is used in combination with other keys.
TAB KEY	You can use the "→|" key on the keyboard to position the insertion marker on a tab. For controlling special functions, this key is used in combination with other keys.
SHIFT KEY	The "⇧" key on the keyboard is used to change the case (lowercase to uppercase and vice versa). In combination with other keys, this key is also used for controlling special functions.
Point to	Move the mouse/cursor to an element displayed on screen (e.g. a button or menu).
Cursor or mouse	You use the cursor/mouse to position the insertion marker or to select a command.
Drag	Point to an element (e.g. a border of a window), press and hold the left mouse button and then move the mouse (do not release the mouse button!).

Conventions

The following conventions apply to the entire documentation. Please read these conventions as they make the documentation quick and easy to use:

Character	Meaning
ATTENTION!	Please carefully read and follow the advice provided in "**ATTENTION!**" sections in order to prevent data loss or other serious problems.
ALT	Key names are written in capital letters.
ALT+D	Key combinations are represented by a "+" character. These keys need to be pressed simultaneously. Here, press and hold the ALT key while pressing the D key.
File	Names of menus, commands, buttons, icons, titles, windows, text in dialog boxes etc. – in other words, all the elements in templates and windows – are shown in **bold**.
`C:\WIN`	Messages issued by the operating system and entries you need to make at the operating system level are shown in `Courier` font. You need to press the ENTER key to confirm these entries.
"**Dear customer**"	(Variable) entries you make in data sheets, data fields, lines etc. – in other words, all user entries – are enclosed in quotation marks.
Memo	Options in list boxes and non-variable entries in data sheets, data fields, lines etc. – in other words, all entries controlled by the program – are shown in **bold**.
Note:	These sections provide additional information on the current topic.
Important!	Please pay special attention to sections marked as "**Important!**" as they provide essential advice and information.

If you need assistance ...

... you will find the necessary information in the online help and the online documentation (see "The Allplan Quantities Documentation" on page 2). In addition, the status bar displays **brief information** about the individual tools on the menus.

If you have further questions, our Technical Support will be glad to help you. You can benefit from the services provided by the Technical Support free of charge for the first three months after purchase of the first license. When you conclude a **Serviceplus agreement**, you do not have to pay for these services even after expiration of this period.

Before contacting the Technical Support, please make a note of the precise wording of the error message including all numbers and abbreviations. To avoid unnecessary questions and delays, try to identify the problem as well as you can.

The Technical Support sometimes requires detailed information on the hardware and configuration of your computer. You should therefore use the **Technote** program to generate support requests.

You can reach the **Technical Support** at the Nemetschek Technology Center in Munich from Monday to Friday from 8 a.m. to 6 p.m.

Phone: 0049 89 / 9 27 93 - 88 88

Fax: 0049 89 / 9 27 93 - 88 09

... and you have a Serviceplus agreement:

For Serviceplus customers, any support provided by the Technical Support is free of charge! If you have any questions pertaining to the program, please send an email to our Technical Support team:

support@nemetschek.de

The Technical Support can also be contacted by phone or fax using the numbers above.

Furthermore, you can also refer to Nemetschek's serviceportal **Allplan Connect**. In addition to a huge knowledge database, the serviceportal **Allplan Connect** provides you with the latest Line-Letters and other helpful information. And you can communicate and exchange information with countless other users.

To access **Allplan Connect**, all you need to do is register:

connect.allplan.com

... and you do not have a Serviceplus agreement:

If you have not yet concluded a Serviceplus agreement after the free 3-month support period, you can purchase **Technical Support tickets** for your support requests through our online shop. More information can be found on our website:

www.nemetschek.de/services/support

Even if you do not have a Serviceplus agreement, you have access to some areas of the serviceportal **Allplan Connect**. All you need to do is register:

connect.allplan.com

The "Technote" program ...

... is a useful aid not only for you, but also for the Technical Support to determine the basic configuration of your hardware and software environment.

Technote generates a list of your computer's configuration and assists you in editing the `AUTOEXEC.BAT`, `CONFIG.SYS`, `NEMMAN.INI` and `ALLRIGHT.INI` system files. The printed report contains all the data required for solving hardware and software problems.

To start the "Technote" program

1 Click **Start** on the Windows task bar and point to **Programs**.

2 Point to **Nemetschek**, select **Allplan BCM** and then click **Technote**.

To print a Technote document

1 Start the **Technote** program.

2 Click **Support request**.

3 Enter contact data.

Important!
Please fill in all the boxes; the Technote document cannot be printed otherwise.

4 Do not activate the **Include configuration files** option unless the Technical Support asks you to.

5 Enter your question or describe your problem in **3. Enter your support request**.

6 Click **Output**.

7 Select the type of output/printout by clicking the relevant button in the **Output** dialog box.

Installing Allplan BCM

This chapter shows how to install

- Allplan BCM on a standalone workstation
- Allplan BCM on a network and
- the sample projects provided on the Allplan DVD.

Information on Allplan BCM Setup

All Allplan BCM program modules are installed using the Allplan BCM Setup program. Allplan BCM Setup automatically prompts you for the information it needs during the installation:

- the drive on which you want to install the Allplan BCM program files (about 200 MB disk space)
- the drive on which you want to install the Allplan BCM data management (at least 200 MB disk space; 25 MB additionally for demo data)
- your license information (license disk, license file or license code).

When you are installing the program for the first time, Allplan BCM Setup also automatically installs some of the sample projects that are provided on your Allplan DVD. If you would like to load additional sample projects, simply use the archive administration in Allplan Quantities (see "Demo Data for Allplan Quantities" on page 189).

Before starting the installation, please make sure that there is enough free disk space on the drives you want to use. Also check that at least 30 MB free disk space is available on the drive on which you have installed your Windows system programs (= system drive).

Important!
Allplan Quantities Version 2014 supports installation on any of the operating systems listed in the "Allplan Quantities System Requirements (on page 1)" chapter. Please ensure that the most recent service packs are installed.

Installing Allplan BCM on a Standalone Workstation

The Allplan BCM Setup program offers you a quick and easy way to install the individual Allplan BCM program modules on your computer.

To install Allplan BCM on a standalone workstation

1 Close all running applications.

2 Log on as system administrator.

3 Insert the Allplan DVD into your DVD drive.

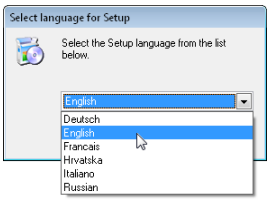
The start menu of the **Allplan 2014 DVD** opens automatically.

4 Click **Programs** in the **DVD Content** column on the left.

5 The **Programs** column is displayed. Click **Allplan BCM**.

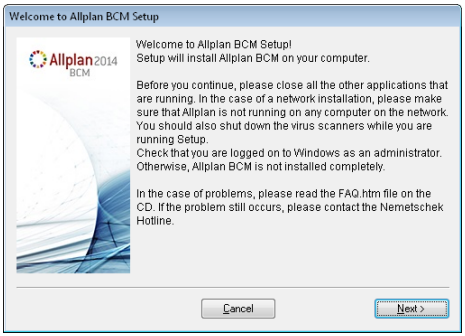
6 In the first dialog box, select a language for the setup process and for the program's user interface.

Note: You can change the user interface language of the installed program any time (**Extras** menu -> **Settings**).



Select a language and click **OK**.

7 Read the information in the **Welcome** dialog box.

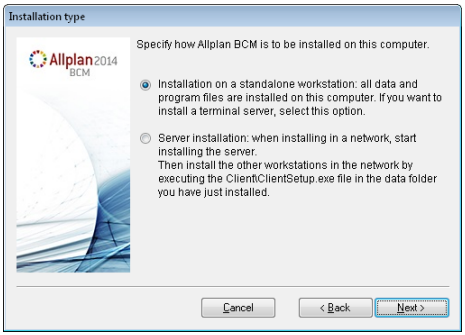


8 Click **Next**.

9 The **Software License Agreement** dialog box (not shown here) appears. Please read the license agreement carefully.

Click **Yes** to accept the license terms.

10 Activate the **Standalone workstation** radio button in the **Installation type** dialog box and click **Next**.

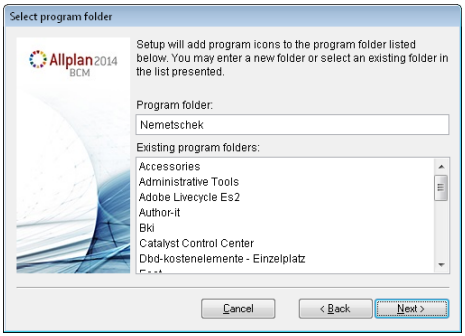


11 Select the license you want to use in the **Select License Information** dialog box.

Insert the license disk into the drive or click  and select the folder containing the license file.

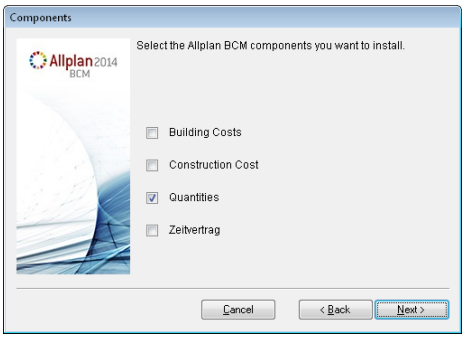
12 Click **Next**.

13 In the **Select program folder** dialog box, select a program group for Allplan Quantities and click **Next**.



14 Choose the Allplan BCM program modules you want to install.

Activate the appropriate check boxes in the **Components** dialog box and click **Next**.

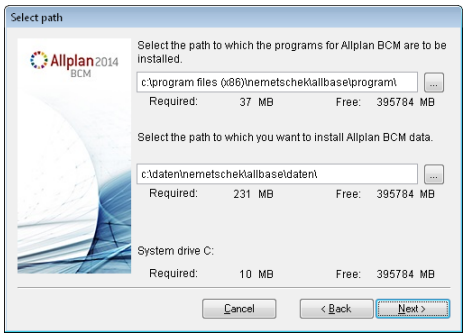


15 The **Select path** dialog box appears. Specify the drives and directories where you want to install the individual Allplan Quantities components.

Tip: You can choose different drives and directories for programs and data. This is usually only necessary, however, when you install Allplan Quantities on a network.

Important!
If you have already installed a different Allplan BCM program module, leave the default path settings unchanged. This way you ensure that all files are copied to the correct directories.

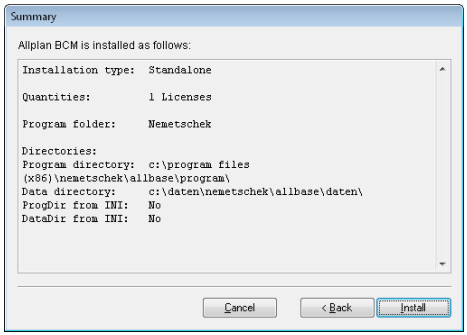
To change a default path, click the ... icon next to it.



16 Check the information given below each directory path to make sure that there is enough free disk space available.

17 Click **Next** to continue with the installation.

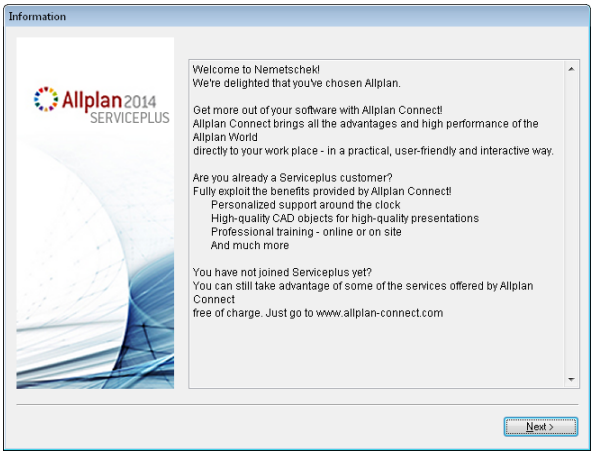
18 Please check all your entries carefully before starting the installation.



19 Click **Install** when the displayed data is correct.

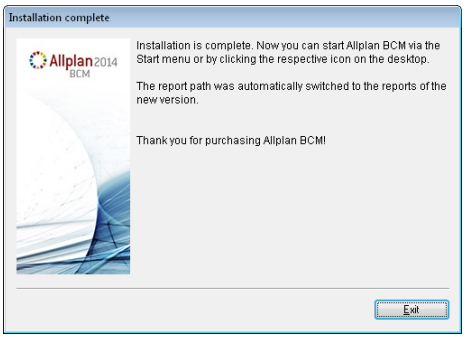
This starts the installation process during which the files are copied to your computer's hard disk.

20 Please read the notes in the **Information** dialog box.



Then click **Next** to continue.

21 Allplan BCM Setup issues the following message when the installation has been successfully completed:



Click **Exit** in the confirmation dialog box.

Installing Allplan BCM on a Network

Allplan BCM is installed on a network in basically the same way as on a standalone workstation. The only differences are the installation type setting (standalone/network), which also determines the amount of files copied to the hard disk, and the settings for the path structure.

Important!
Installing Allplan BCM on a network requires an in-depth knowledge of the network software and the path structure on the network. Therefore, the installation should only be performed by the system administrator for the network.

When running Allplan BCM on Windows, it is recommended to provide each workstation with its own local hard disk on which Windows is installed. This increases processing speed and saves network resources, particularly regarding swap files.

If no local hard disks are available, proper network installation of Windows is indispensable. Besides the Windows directory of the basic installation, which contains the shared Windows files, you need to provide a separate Windows directory for each workstation. There you store the Windows files (e.g. `INI` files) that are specific to that workstation. The Windows network installation should also only be performed by the system administrator for the network.

The following steps describe the most common network installation procedure (data on server, programs and local working directory on clients); other constellations are of course also possible provided the required network knowledge is available.

To install Allplan BCM on a network

1 First install the server.

  Proceed as described in steps 1 to 9 in the "Install Allplan BCM on a Standalone Workstation" section.

2 In step 10, activate the **Server installation** radio button in the **Installation type** dialog box and click **Next**.

3 Select the license you want to use in the **Select License Information** dialog box.

Insert the license disk into the drive or click  and select the folder containing the license file.

4 Click **Next**.

5 The **Select path** dialog box appears. Enter the network drive on the server as the data directory.

6 Proceed from step 15 in the "Install Allplan BCM on a Standalone Workstation" section to complete the server installation.

Important!
In the above procedure, no Allplan BCM workstation is installed on the server computer. The workstations are only set up in the individual clients. If you want to use the server as an Allplan BCM workstation, run a client installation on the server after you have completed the server installation.

7 Continue by installing the clients.

Tip: You can do this directly at each client without using the Allplan DVD.

Run the `ClientSetup.exe` file on the client. You will find the file in the `..\Daten\Nemetschek\Allbase\Daten\Client` directory on the server. Then proceed as described in steps 7 to 9 and 11 to 14 in the "Install Allplan BCM on a Standalone Workstation (see "Installing Allplan BCM on a Standalone Workstation" on page 12)" section.

8 Enter the program directory on the client in the **Select path** dialog box.

9 Proceed from step 15 in the "Install Allplan BCM on a Standalone Workstation" section to complete the client installation.

Installing Demo Data

On the Allplan DVD, you will find a selection of Allplan Quantities sample projects and other demo data (including standard text of various providers) for your convenience. Part of the demo data is installed automatically when you install Allplan Quantities for the first time. Using Allplan Quantities's archive administration tool, you can quickly and easily import additional sample projects.

When you update, the demo data is not installed automatically, ensuring that existing data is not overwritten. In this case, you can also simply use the archive administration to import the demo data.

Note: Some sample projects use a predefined Allplan project. This project is also included in the Allplan DVD and can be found in the `<dvd>\programs\Allplan BCM\Demodaten_Baukosten\Allplandaten` directory. Load this sample project by using Allplan's archive administration (= Allmenu).

Import Demo Data into Allplan Quantities

To import demo data into Allplan Quantities

1 Insert the Allplan DVD into the DVD drive.

Note: After you have inserted the DVD, the Allplan start menu usually opens automatically. If this is the case, click the  **Close** button.

2 Start Allplan Quantities.

3 Click **Archive** on the **Project Data** menu.

The **Archive administration** dialog box appears.

4 Click **Path**.

The **Browse for folder** dialog box opens.

5 Select the DVD drive.

6 Set the path to a subfolder of the <dvd>\programs\Allplan BCM\Demodaten_Baukosten directory. Then click **OK**.

   The path is transferred straight to the **Archive administration** dialog box and the projects in the selected directory are displayed.

7 Select the project(s) to be installed in the **Archives** list box (right pane in dialog box) and click the **Restore archive** icon.

8 Click **Close** in the **Archive administration** dialog box when the import is complete.

You can then open these projects using the **Project overview** data sheet, for example.

Graphical Quantity Takeoff Operations Using Allplan

Both when designing in 3D using Allplan and when editing files in Allplan Quantities, you generate data that is of relevance to the architectural design process. This data includes material and component definitions, specification descriptions consisting of items and quantities (length, area, number, volume, etc.).

You can transfer this data, which needs to be made available to both Allplan and Allplan Quantities, from one system (in which the data originated) to the other system (where the data can be used for the subsequent design). This ensures that the data is only created once. Thus, possible sources of errors are excluded and the data volume is kept to a minimum.

The quantities which are automatically created in Allplan when you design in 3D are particularly important for Allplan Quantities: as all the item quantities are transferred from Allplan to Allplan Quantities, is it not necessary to perform time-consuming quantity takeoff operations in Allplan Quantities. Furthermore, the costs of construction projects can be calculated quickly and efficiently based on master catalogs associated with prices.

Functional Principle of Quantity Takeoff Operations Using Graphics

First, the relevant specification descriptions are set up as item catalogs with a trade structure (= master file) in Allplan Quantities. In addition, a ”code text” is assigned to these specification descriptions. Then, the items of this master file are used to create elements, which are combined in an element master.

The specification descriptions prepared in this manner are accessed when materials are defined in Allplan: in the process of designing components, materials are selected from the catalogs provided and assigned based on the code text. As Allplan automatically updates all the quantities of components, quantity takeoff schedules can be created quickly and easily once the design is complete.

These schedules are transferred to Allplan Quantities and the code text is used to assign the quantities specified to the specification descriptions. As you go along, you can run analyses based on a wide range of different criteria and/or process these files in many different ways.

Two columns of quantity takeoff schedules created in Allplan play a central role in graphical quantity takeoff operations: the **Code text** column (which can be considered equivalent to a material or item number) and the **Quantity** column. All the other columns like **Component number**, **Room number**, **Room name** and **Component ID** are primarily used to identify the individual quantity calculations in Allplan Quantities and only have a subordinate role as far as the actual data transfer is concerned.

The significant advantage of this method is that VOB-compliant quantities are available immediately. In addition, fully automatic cost calculations can be performed when the items in the master catalogs are associated with the current prices.

Catalog Types for Quantity Takeoff Operations Using Graphics

A distinction is made between item catalogs and element catalogs.

Specification descriptions in item catalogs are structured by trade. In element catalogs, the specification descriptions of different trades are automatically combined in ”item packages” that fully describe a component.

The master file is a special type of item catalog. It contains all the specification descriptions (= items) used for creating the individual elements in the element catalogs.

While designing in Allplan, you can assign individual items from an item catalog (= item method) or entire elements from an element catalog (= element method) to components and then transfer this data to Allplan Quantities where it can then be analyzed and evaluated in conjunction with the relevant file.

Item catalogs

The item catalogs are the master directories of all specification descriptions required for the implementation of construction projects and the associated tenders.

Items in item catalogs are structured by trade.

Master file

The master file is the master directory of the specification descriptions required for creating elements in element catalogs. You can define your own specification descriptions. As an alternative, specification descriptions can be copied from item catalogs to the master file.

Items in the master file are also structured by trade.

Important!
Using a master file is the best way to ensure that the quantities will be imported correctly.

Elements

An element consists of several items of different trades and describes a complete component. A possible element, for example, is an interior wall consisting of masonry, plaster, wallpaper, paint and baseboard. If you want, you can add further items (from the fields of electrical installations and sanitary facilities, for example) to this element.

These items are integrated in the element using an ”estimated” factor based on experience, for example.

You ideally create all the elements by using items from the master file. This way, you ensure that the item quantities specified in the quantity takeoff schedule can be correctly assigned to the relevant specification descriptions in the item catalog. The assignment is made based the code text and is only possible if the item catalog (= master file) used for creating the elements and the item catalog used as the basis for the import of quantities are exactly the same.

Element master

The element master is the *project-independent* master directory of all elements (= components) and serves as the basis for *project-specific* element schedules.

It is a good idea to sort the element master by logical groups, facilitating quick access to the elements. Possible directories in the hierarchy would be exterior walls, interior walls, slabs etc., for example.

Element schedules

Element schedules are *project-specific* directories of elements (= components), which are set up based on the elements provided in the element master. Element schedules are used to limit the material offered for selection to only those elements (= materials) that are to be used in a project.

Project-specific and trade-specific files are generated based on element schedules. This means that element schedules serve as the basis for item-specific quantity takeoff operations and the tender. In addition, element schedules can be used for cost calculations in compliance with DIN 276.

Important!
If you want to use element schedules to generate files later, the following requirements must be met: the elements must have been created based on items of the master file, which must include all the items and, in addition, the code text must match.

Requirements for Quantity Takeoff Operations Using Graphics

System requirements

Allplan and Allplan Quantities must be installed on the same computer or in a common network.

In addition, the two systems must have full access to the directories described in the section entitled ”System Configuration and Settings”.

Software requirements

As Allplan and Allplan Quantities are continuously refined, new versions including new functions and improvements to existing features are available at regular intervals.

To fully exploit the advantages provided by graphical quantity takeoff operations, you should always work with the *latest* versions of Allplan and Allplan Quantities .

Design requirements

Basic requirements concerning the design:

- The building model *must* be created in 3D, so that the dimensions, quantities, cubic volume, etc. can be calculated.
- All materials and attributes you want to include in analyses *must* be defined based on the catalogs provided by Allplan Quantities when you enter components or later.

System Configuration and Settings

To ensure a seamless and smooth exchange of data between Allplan and Allplan Quantities, you need to make/check some settings just *once*.

Otherwise, "online" access to data is not possible. In other words, you cannot access Allplan Quantities data while working in Allplan.

Settings in Allplan Quantities

You need to make two path settings in Allplan Quantities:

- A path must be set to the data exchange directory in which Allplan stores the files with the results of quantity takeoff operations.
- Another path must be set to the directory where Allplan's default settings are saved. These defaults include component attributes (e.g. information on trades), which are important for setting up catalogs in Allplan Quantities (cf. section entitled "CAD Attributes for Items").

Settings in Allplan

You also need to make/check two path settings in Allplan:

- Before you begin designing in Allplan, make sure that the **nem_ava** catalog is selected for the components that you will need for designing. You can check this setting globally in the default settings or by calling the relevant function for each component.

  Note: The **nem_ava** catalog is usually preset by default for most components, but it still always a good idea to check just in case.

- In addition, you need to set the path to the Allplan Quantities directory so that you can access the projects in this directory right from Allplan.

Set the Paths to Allplan in Allplan Quantities

To set Allplan paths in Allplan Quantities

1 Click **Settings** on the **Extras** menu.

2 Open the **Folders** tab in the **Settings** dialog box.

3 In the **File type** list box, scroll down to the end, select **Allplan quantities** and click the **Edit** button.

4 The **Browse for folder** dialog box appears. Set the path to the Allplan exchange directory (usually `...\Program Files\Nemetschek\Allplan\Usr\Local\i_o`) and click **OK**.

5 Using the same approach, define the path for the Allplan defaults.

In the **File type** list box, select **Allplan STD**, click **Edit** and set the path (usually `...Daten\Nemetschek\Allplan\Std`).

6 Click **OK**.

Check the "nem_ava" Catalog Assignment in Allplan

To ensure the correct assignment of quantities and materials when performing quantity takeoff operations and transferring the results to Allplan Quantities, check that the **nem_ava** catalog is set for each component (surface, solid, component, baseboard, etc.) whose quantities you want to transfer to Allplan Quantities.

To check the default setting of the catalog assignment

1 Start Allplan.

2 Click  **Options** on the **Extras** menu.

Or:

Click  **Options** in the **Standard** toolbar.

3 Click **Architecture** in the **Options** dialog box.

4 Open the **Settings** tab in the **Architecture Options** dialog box.

5 In the **Catalogs, paths** area, select the applicable component type in the list box on the right. Click **Catalog assignment**.

6 In the left-hand column of the **Attributes for quality selection** dialog box, activate the attributes that are to be provided for the component.

7 Make sure the **nem_ava** catalog is set for each activated attribute.

If the catalog is not set for an attribute, click the right-hand column of that attribute and select **nem_ava** in the **Catalog assignment** dialog box.

Note: You can change this setting any time by editing the **properties** of the individual component.

8 Repeat steps 5 to 7 for all relevant components.

To check the catalog assignment for individual component types during the design process

➲ You have activated a tool for creating a component (e.g. the  **Wall** tool in the **Walls, Openings, Components** module).

1 Open the  **Properties** dialog box.

2 Check the label on the button next to **Catalog assignment** (e.g. in the **Parameters, Attributes** tab for **Wall** properties and in the **Material** area for **Slab** properties).

If the **nem_ava** catalog is not entered there, click the button and assign the **nem_ava** catalog to the individual material categories in the **Attributes for quality selection** dialog box.

To do this, click the right table field in the relevant line and select **nem_ava** in the **Catalog assignment** dialog box.

3 Click **OK** to confirm this setting for each material category.

Set the Path to the Allplan Quantities Directory

The path to the Allplan Quantities directory is entered the *first* time you open the material catalog in Allplan. This setting is saved and is thus available whenever you start Allplan.

To set the path to the Allplan Quantities directory in Allplan

1 In Allplan, activate a tool for creating components (e.g. the  **Wall** tool in the **Walls, Openings, Components** module).

2 Open the  **Properties** dialog box.

3 Open the **Parameters, Attributes** tab and click in the input field in the **Material/Quality** column.

4 The first time the **nem_ava** catalog is activated, the **Select the Catalog Data Path** dialog box appears.

Click **Yes** to specify the Allplan Quantities data path.

5 Set the path to the Allplan Quantities directory (usually: `...Daten\Nemetschek\Allbase\Daten`) and click **Select**.

The **Catalog** dialog box lists all the projects available in Allplan Quantities.

6 Open the list box and select the project whose material definition you want to use.

7 Select an element/item.

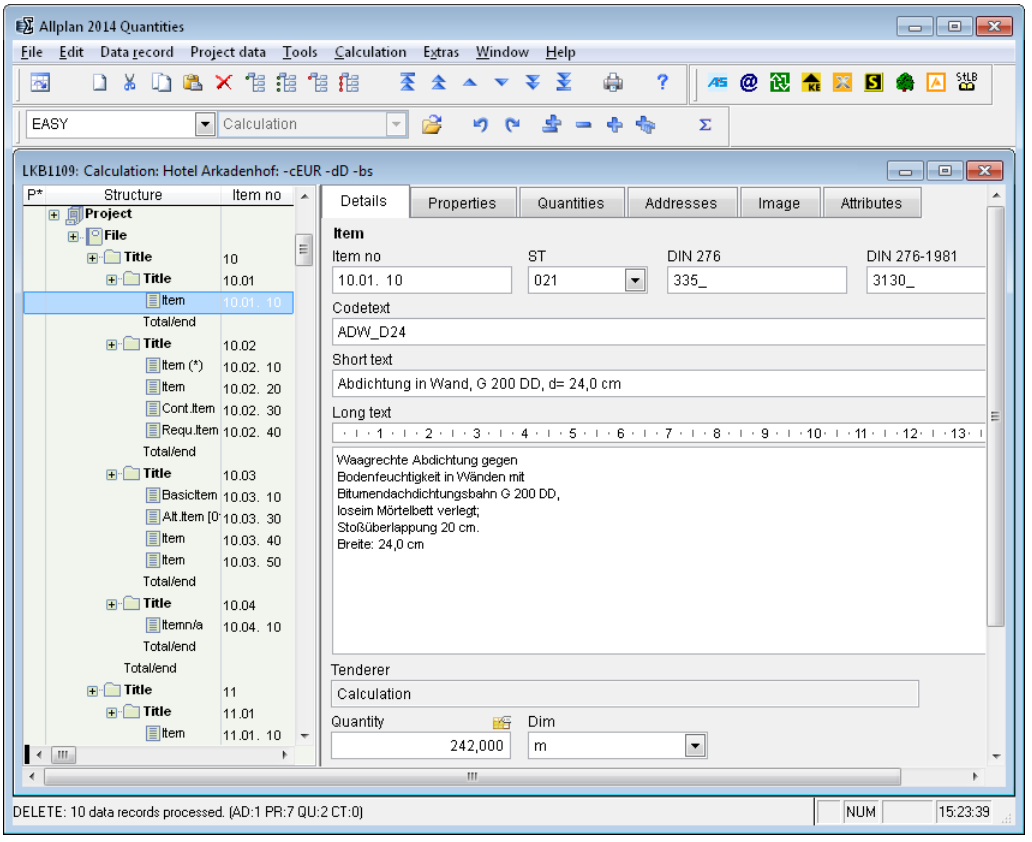
8 Click **OK** to confirm your selection.

9 Set the other parameters and design the component.

User Interface in Allplan Quantities

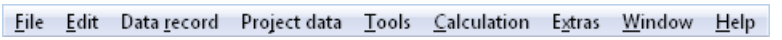
The application window of Allplan Quantities basically consists of three areas:

- the menu bar (see ”Menu Bar in Allplan Quantities” on page 32) below the title bar of the window,
- the toolbars below and
- the space reserved for displaying data sheets.



Menu Bar in Allplan Quantities

The menu bar in Allplan Quantities consists of the following menus:



To activate a tool via the menu bar, all you need to do is click a menu. The menu clicked opens and you can select one of the tools presented.

Note: A description of all the tools on the menus is provided in the reference section entitled ”Menus and Tools” in the online help.

Toolbars in Allplan Quantities

You can use the buttons provided in the toolbars to activate the main tools without having to select a menu first. All you need to do is click the relevant icon.

The toolbars in Allplan Quantities are divided into logical groups: The upper toolbar includes the most important, general tools that are not focused on any specific project. Consequently, this toolbar is named **General functions** toolbar. The lower toolbar – **Project functions** – provides project-specific functions. In the **Text libraries** toolbar, you can access text catalogs of various providers. For this, you need to install these catalogs first.

Note: The sections entitled Buttons in the **General functions** toolbar, Buttons in the **Project functions** toolbar and Buttons in the **Text libraries** toolbar provide an overview of the functions you can select directly without opening a menu first.

You can display and hide as well as dock and float the toolbars separately to suit your requirements.

Buttons in the "General Functions" Toolbar

The button on the left in the **General functions** toolbar represents the following tool:

Icon	Function	Use
	Open project overview	You can use this tool to execute the **Project Overview** command on the **File** menu, which opens the **Project Overview** data sheet.

The five buttons in the next block of the **General functions** toolbar represent the following tools on the **Data Record** menu:

Icon	Function	Use
	New data record	You can use this tool to execute the **New** command on the **Data Record** menu.
	Cut data record	You can use this tool to execute the **Cut** command on the **Data Record** menu.
	Copy data record	You can use this tool to execute the **Copy** command on the **Data Record** menu.
	Paste data record	You can use this tool to execute the **Paste** command on the **Data Record** menu.
	Delete data record	You can use this tool to execute the **Delete** command on the **Data Record** menu.

The four buttons in the next block of the **General functions** toolbar help you select data records:

Icon	Function	Use
	Mark current line	You can use this tool to execute the **Mark Line** command on the **Data Record** menu.

Icon	Function	Use
	**Mark entire hierarchy**	You can use this tool to execute the **Mark Hierarchy** command on the **Data Record** menu.
	**Cancel current line marker**	You can use this tool to execute the **Cancel Marking** command on the **Data Record** menu.
	**Cancel hierarchy marker**	You can use this tool to execute the **Cancel Hierarchical Marking** command on the **Data Record** menu.

The six buttons in the adjacent block of the **General functions** toolbar are provided for quickly moving the insertion marker in a vertical direction within a data sheet:

Icon	Function	Use
	**Top of data sheet**	You can use this tool to move the insertion marker to the top (= first line) of the data sheet, which defines the section displayed (equivalent to the **Goto Project Start** tool on the **Data Record** menu).
	**Hierarchy step upwards**	You can use this tool to move the insertion marker up to the next data record on the same level in the hierarchy (equivalent to the **Hierarchy Step Upwards** tool on the **Data Record** menu).
	**Up**	You can use this tool to move the insertion marker up a line (equivalent to the **Line Step Upwards** tool on the **Data Record** menu).
	**Down**	You can use this tool to move the insertion marker down a line (equivalent to the **Line Step Downwards** tool on the **Data Record** menu).
	**Hierarchy step downwards**	You can use this tool to move the insertion marker down to the next data record on the same level in the hierarchy (equivalent to the **Hierarchy Step Downwards** tool on the **Data Record** menu).
	**Bottom of data sheet**	You can use this tool to move the insertion marker to the end (= last line) of the data sheet, which defines the section displayed (equivalent to the **Go to Project End** tool on the **Data Record** menu).

The two buttons on the far right in the **General functions** toolbar are frequently used tools:

Icon	Function	Use
	Print	You can use this tool to execute the **Print** command on the **File** menu.
	Help	You can use this tool to activate the context-sensitive online help; i.e. help on the tool, data sheet etc. that is currently active is displayed.

Buttons in the "Project Functions" Toolbar

The **Project functions** toolbar includes buttons for the most important tools that you need to edit projects. This way, access to the most frequently used tools is provided without requiring you to select a menu first.

Icon	Function	Use
(left)	**Select scheme**	You can use this button to open the **Select scheme** list box, which lets you set the data sheets' contents and appearance.
(right)	**Data sheet (= processing phase)**	You can use this button to display the data sheet for the current project phase.
	Open project	You can use this tool to execute the **Open** command on the **File** menu.
	Undo	You can use this tool to execute the **Undo** command on the **Data Record** menu.
	Repeat	You can use this tool to execute the **Repeat** command on the **Data Record** menu.

Icon	Function	Use
	Filter current hierarchy	You can use this tool to show only the data records of the current level in the hierarchy.
	Hide current hierarchy	You can use this tool to execute the **Hide Current Hierarchy** command on the **Data Record** menu.
	Display current hierarchy	You can use this tool to execute the **Display Current Hierarchy** command on the **Data Record** menu.
	Display all hierarchy levels	You can use this tool to execute the **Display All Hierarchy Levels** command on the **Data Record** menu.
Σ	**Calculate everything**	You can use this tool to execute the **Calculate Everything New** command on the **Calculation** menu.

Buttons in the "Text Libraries" Toolbar

The **Text libraries** toolbar provides buttons you can use to access the most important text libraries associated with Allplan Quantities. Requirement: the relevant library must be installed.

Icon	Function	Use
	Architekten-Service	You can use this tool to execute the **Architekten-Service** command provided in the **Text libraries** tool on the **Tools** menu.
@	**ausschreiben.de**	You can use this tool to execute the **ausschreiben.de** command provided in the **Text libraries** tool on the **Tools** menu.

Icon	Function	Use
	**HeinzeBauOffice**	You can use this tool to execute the **HeinzeBauOffice** command provided in the **Text libraries** tool on the **Tools** menu.
	**DBD-Dynamische Kostenelemente**	You can use this tool to execute the **DBD-Dynamische Kostenelemente** command provided in the **Text libraries** tool on the **Tools** menu.
	**DBD-LVexpress**	You can use this tool to execute the **DBD-LVexpress** command provided in the **Text libraries** tool on the **Tools** menu.
	**Standard service catalog for building**	You can use this tool to execute the **STLB-Bau** command provided in the **Text libraries** tool on the **Tools** menu.
	**GreenBASE - Plant Disposition**	You can use this tool to execute the **GreenBASE - Plant Disposition** command provided in the **Text libraries** tool on the **Tools** menu.
	**sirAdos building data**	You can use this tool to execute the **sirAdos building data** command provided in the **Text libraries** tool on the **Tools** menu.
	**Standard service catalog**	You can use this tool to execute the **StLB** command provided in the **Text libraries** tool on the **Tools** menu.

Basic Introduction

This chapter deals with the basics that are essential for your understanding of Allplan Quantities.

Here, you can find general information about data sheets as well as specific information on the purpose, structure, and setup of the individual data sheet types.

In addition, this chapter provides detailed information on memo fields, object fields, and processing templates. It also shows you how you can use the user-definable settings to customize Allplan Quantities to your needs.

Furthermore, this chapter covers how to generate printouts, i.e. how to print overviews, files, cost calculations, quantity calculations, etc.

ATTENTION!
Data backup is generally one of the *critical issues* in the IT industry. For this reason, backing up data and archiving projects are covered in a separate section. There, you will learn how to archive, back up, and restore projects and how to back up your individual column settings, column definitions and reports, and how to restore them.

About Data Sheets

Data sheets play a central role in Allplan Quantities. Opening a data sheet establishes a link between the data sheet and the relevant database. The relevant data is read from the database into the selected data sheet where it is entered in the individual lines and columns, as in a spreadsheet. This link is retained until you close the data sheet.

Tip: A general description of how to work with data sheets is provided in the section entitled "Using Data Sheets".

There are three types of data sheets:

- Project-independent data sheets
- Data sheets for managing master data
- Project-specific data sheets

Project-independent data sheets

All the projects and master data are managed in the **Project overview** data sheet (see ""Project Overview" Data Sheet" on page 41) where you can create new projects, delete projects you no longer need, save and load projects.

In the **Address overview** data sheet (see ""Address Overview" Data Sheet" on page 42), you can access and organize addresses. In addition to the various options provided for sorting, finding and filtering addresses, you can also print out the addresses you have archived.

Objects (e.g. images and sketches) are managed centrally in the **Image overview** data sheet (see ""Image Overview" Data Sheet" on page 44). For example, you can copy objects to this data sheet using the Windows Clipboard or add OLE objects to the image database. The objects archived in the image database can then be copied to the Windows Clipboard and pasted into the object windows of project-specific data sheets. This way, objects can be integrated into projects or used as company logos in printouts, for example.

The **CAD XPad** (see ""CAD XPad" Data Sheet" on page 45) data sheet displays the CAD data currently imported. In addition, you select the items to be integrated in a project in this data sheet.

Data sheets for managing master data

Allplan Quantities provides the **Master** and **Element master** data sheets for managing master data.

The difference between master text and element catalogs is that master text is usually structured based on the individual items in a file (i.e. sorted by title). In element catalogs, on the other hand, items are structured on a component-oriented basis.

Note: As the **Master** and **Element master** data sheets have a data structure similar to project-specific data sheets and work in the same way, they are not explained separately. Where differences exist, they will be pointed out in the relevant description.

Project-specific data sheets

Projects are edited using the project-specific data sheets. Allplan Quantities provides data sheets for all the phases of a project; this means that you can use the data sheet best suited to the task at hand. Only the data that is relevant to the current phase is entered in the data sheet associated with the phase in question.

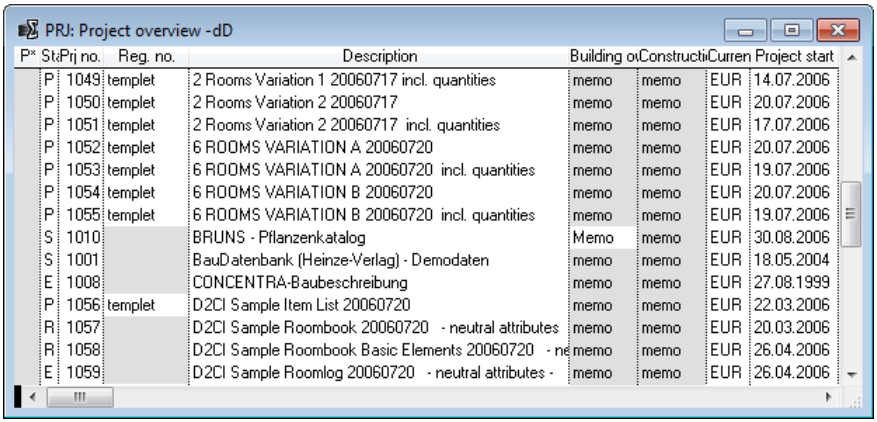
In a project, initial cost estimates are made right from the outset. Using the options provided by Allplan Quantities, you can quickly get an overview of the cost of the building and/or the individual components used. All you need to do is copy the elements you want to include from the **Element master** data sheet to the project-specific **Element schedule** data sheet. Then you simply complete the quantities - that's all! Element schedules can also be analyzed and evaluated based on DIN 276-compliant cost groups by using the relevant reports.

In the **Calculation** data sheet, you can create files for a project and perform quantity and cost calculations.

"Project Overview" Data Sheet

In Allplan Quantities, the term "project" encompasses master text, element catalogs, element and room schedules as well as the actual files. The **Project overview** data sheet (how to open...) provides up-to-date information on the projects (in the currently set data directory) and their processing status.

You can customize the contents and layout of the **Project overview** data sheet to suit your needs. For example, a **Project overview** data sheet that has just been opened might look like this:



P*	St	Prj no.	Reg. no.	Description	Building ob	Constructi	Curren	Project start
	P	1049	templet	2 Rooms Variation 1 20060717 incl. quantities	memo	memo	EUR	14.07.2006
	P	1050	templet	2 Rooms Variation 2 20060717	memo	memo	EUR	20.07.2006
	P	1051	templet	2 Rooms Variation 2 20060717 incl. quantities	memo	memo	EUR	17.07.2006
	P	1052	templet	6 ROOMS VARIATION A 20060720	memo	memo	EUR	20.07.2006
	P	1053	templet	6 ROOMS VARIATION A 20060720 incl. quantities	memo	memo	EUR	19.07.2006
	P	1054	templet	6 ROOMS VARIATION B 20060720	memo	memo	EUR	20.07.2006
	P	1055	templet	6 ROOMS VARIATION B 20060720 incl. quantities	memo	memo	EUR	19.07.2006
	S	1010		BRUNS - Pflanzenkatalog	Memo	memo	EUR	30.08.2006
	S	1001		BauDatenbank (Heinze-Verlag) - Demodaten	memo	memo	EUR	18.05.2004
	E	1008		CONCENTRA-Baubeschreibung	memo	memo	EUR	27.08.1999
	P	1056	templet	D2CI Sample Item List 20060720	memo	memo	EUR	22.03.2006
	R	1057		D2CI Sample Roombook 20060720 - neutral attributes	memo	memo	EUR	20.03.2006
	R	1058		D2CI Sample Roombook Basic Elements 20060720 - ne	memo	memo	EUR	26.04.2006
	E	1059		D2CI Sample Roomlog 20060720 - neutral attributes -	memo	memo	EUR	26.04.2006

The projects displayed in the **Project overview** data sheet can be sorted alphabetically by column and filtered according to different criteria. This way, you keep a good overview, even with a large number of projects. Moreover, for each project overview output, only the data lines displayed in the **Project overview** data sheet will be taken into account. Thus, all sorting and filter criteria you have specified will also be included in printouts.

An overview of the projects included in the project management can be displayed on screen or sent to a printer. Here again, the output will be limited to the data lines displayed in the **Project overview** data sheet. This means that all the criteria you have defined using the **Organize and filter** tool will be taken into account.

Projects you no longer need can be deleted from the current project management data directory and from the archive.

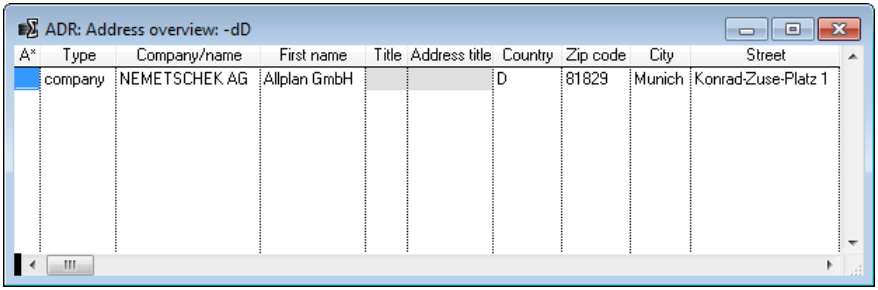
Note: For descriptions of how to do all this, see the "Editing projects" section. The "Columns in the **Project overview** data sheet" section provides information on the columns of this data sheet and their contents.

"Address Overview" Data Sheet

The contact data of your clients, design partners and potential contractors, which you need for your daily work, can be managed in the central Allplan Quantities address database. This means that you do not have to re-enter the addresses each time again, but you can retrieve them easily from the address database when working within any program module.

The **Address overview** data sheet (how to open...) provides an overview of all addresses archived in the central database (e.g. addresses of clients, authorities, employees etc.).

You can customize the contents and layout of the **Address overview** data sheet to suit your needs. For example, an **Address overview** data sheet that has just been opened might look like this:



The addresses displayed in the **Address overview** data sheet can be sorted alphabetically by column and filtered according to different criteria. This way, you keep a good overview, even with a large number of archived addresses. Moreover, for each address overview output, only the data lines displayed in the **Address overview** data sheet will be taken into account. Thus, all sorting and filter criteria you have specified will also be included in printouts.

An overview of the addresses archived in the address database can be displayed on screen or sent to a printer. Here again, the output will be limited to the data lines displayed in the **Address overview** data sheet. This means that all the criteria you have defined using the **Organize and filter** tool will be taken into account.

Addresses you no longer need or that have become obsolete can be deleted from the address database including all associated address data.

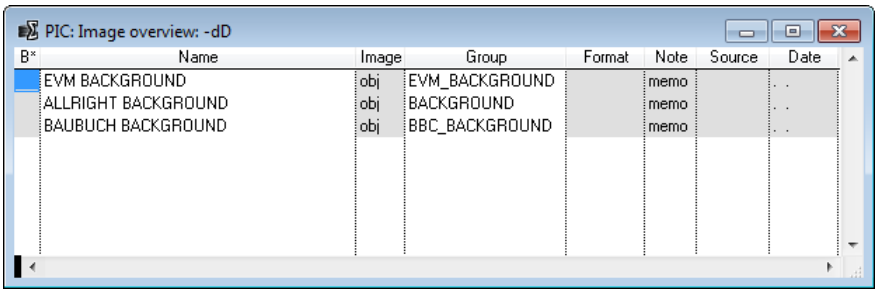
Note: For descriptions of how to do all this, see the "Editing addresses" section. The "Columns in the **Address overview** data sheet" section provides information on the columns of this data sheet and their contents.

"Image Overview" Data Sheet

In Allplan Quantities, you can enhance your files by adding images and sketches (= "objects"). The image database offers the option to centrally archive all the objects available for your projects. Consequently, the objects saved in the image database can be accessed from within any program module, either while editing your projects or by retrieving them from the address database.

The **Image overview** data sheet (how to open...) provides a list of all the objects archived in the image database.

You can customize the contents and layout of the **Image overview** data sheet to suit your needs. For example, an **Image overview** data sheet that has just been opened might look like this:



The objects displayed in the **Image overview** data sheet can be sorted alphabetically by column and filtered according to different criteria. This way, you keep a better overview, even with a large number of archived objects. Moreover, for each object overview output, only the data lines displayed in the **Image overview** data sheet will be taken into account. Thus, all sorting and filter criteria you have specified will also be included in printouts.

An overview of the objects archived in the image database including the associated object information can be displayed on screen or sent to a printer. Here again, the output will be limited to the data lines displayed in the **Image overview** data sheet. This means that all the criteria you have defined using the **Organize and filter** tool will be taken into account.

Note: For descriptions of how to do all this, see the "Editing images and sketches" section. The "Columns in the **Image overview** data sheet" section provides information on the columns of this data sheet and their contents.

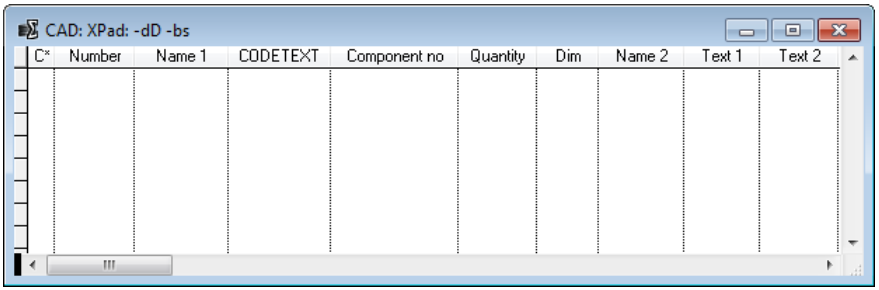
"CAD XPad" Data Sheet

The **CAD XPad** data sheet (how to open...) represents the interface between project handling with Allplan Quantities and other applications such as the Allplan CAD system. The **CAD XPad** data sheet should be considered as a *temporary* database for CAD data to be imported (e.g. results from quantity calculations). In addition, this tool provides a convenient way to quickly make entries which can later be used to generate element schedules or files.

Before integrating Allplan data into an element schedule or a file, you can import this data into the **CAD XPad** data sheet first. Once the import process is complete, you can check its results by displaying the contents of the **CAD XPad** data sheet. The **CAD XPad** further enables you to filter the imported data records for the specific components you want to transfer to your file structure.

ATTENTION!
Bear in mind that the entries in the **CAD XPad** data sheet are not saved *permanently*. They will rather be overwritten whenever you import new data. To preserve the current contents of the **CAD XPad** data sheet, you need to integrate the data into a file structure.

You can customize the contents and layout of the **CAD XPad** data sheet to suit your needs. For example, a **CAD XPad** data sheet that has just been opened might look like this:



The components contained in the **CAD XPad** data sheet after importing the CAD data can be sorted alphabetically by column and filtered according to different criteria. As only the components that are displayed when you access the **CAD XPad -> Element Schedule** or **CAD XPad -> Project** tool are transferred to an element schedule or file, the filter functions play a decisive role here.

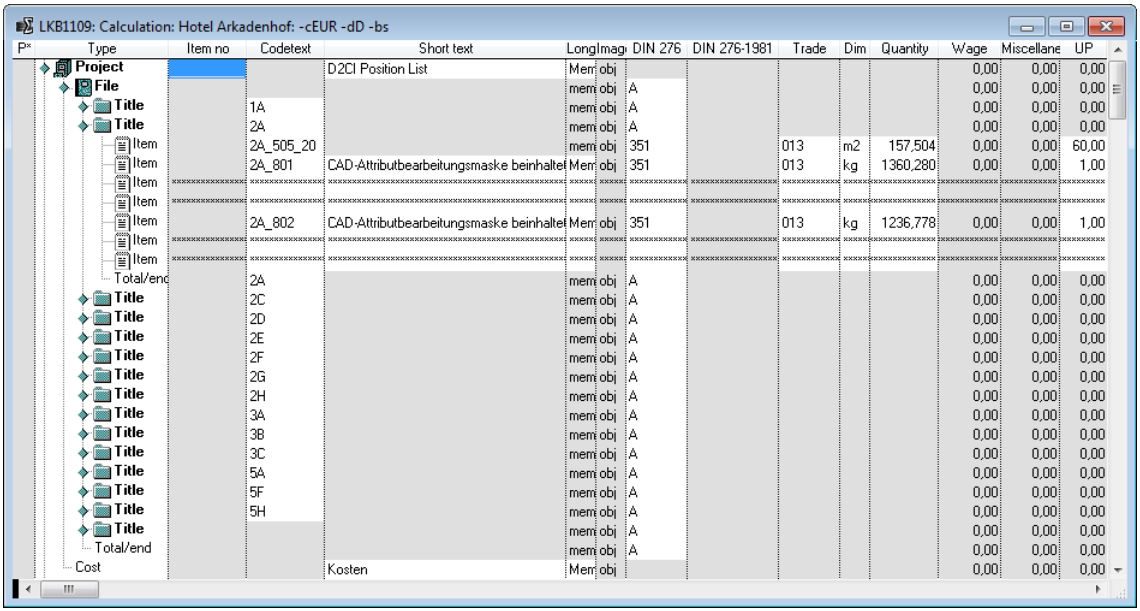
Note: For descriptions of how to do all this, see the "Editing CAD data" section. The "Columns in the **CAD XPad** data sheet" section provides information on the columns of this data sheet and their contents.

Project-Specific Data Sheets

To edit a project, you need to open it in a project-specific data sheet. To facilitate showing and hiding of parts of the hierarchy, a "navigator", which is similar to that in Windows Explorer, is displayed in the **Type** column of these data sheets (*not* available in the **CLASSIC** scheme). This navigator has much in common with the Windows Explorer: You can open and close hierarchies simply by clicking on the corresponding ⊞ or ⊟ icon. Or, for example, you can reposition or copy items to other data sheets by dragging and dropping them.

But there are some differences to the navigator in the Windows Explorer: in the Windows Explorer, there is no fixed order for the file display. After each update, the files will be reordered, e.g. alphabetically. In Allplan Quantities however, the data records are always arranged in the order specified by you. For this reason, when dragging and dropping an item, do not drag it to the title where you want to insert it, but exactly to the line *above which* you want to insert the item.

The contents and layout of an open data sheet depend on your personal settings and of course on your project data. For example, a project-specific data sheet that has just been opened might look like this:



P*	Type	Item no	Codetext	Short text	LongImage	DIN 276	DIN 276-1981	Trade	Dim	Quantity	Wage	Miscellane	UP
	Project			D2CI Position List	Mem	obj					0,00	0,00	0,00
	File				mem	obj	A				0,00	0,00	0,00
	Title		1A		mem	obj	A				0,00	0,00	0,00
	Title		2A		mem	obj	A				0,00	0,00	0,00
	Item		2A_505_20		mem	obj	351	013	m2	157,504	0,00	0,00	60,00
	Item		2A_801	CAD-Attributbearbeitungsmaske beinhaltet	Mem	obj	351	013	kg	1360,280	0,00	0,00	1,00
	Item												
	Item												
	Item		2A_802	CAD-Attributbearbeitungsmaske beinhaltet	Mem	obj	351	013	kg	1236,778	0,00	0,00	1,00
	Item												
	Item												
	Total/end		2A		mem	obj	A				0,00	0,00	0,00
	Title		2C		mem	obj	A				0,00	0,00	0,00
	Title		2D		mem	obj	A				0,00	0,00	0,00
	Title		2E		mem	obj	A				0,00	0,00	0,00
	Title		2F		mem	obj	A				0,00	0,00	0,00
	Title		2G		mem	obj	A				0,00	0,00	0,00
	Title		2H		mem	obj	A				0,00	0,00	0,00
	Title		3A		mem	obj	A				0,00	0,00	0,00
	Title		3B		mem	obj	A				0,00	0,00	0,00
	Title		3C		mem	obj	A				0,00	0,00	0,00
	Title		5A		mem	obj	A				0,00	0,00	0,00
	Title		5F		mem	obj	A				0,00	0,00	0,00
	Title		5H		mem	obj	A				0,00	0,00	0,00
	Title				mem	obj	A				0,00	0,00	0,00
	Total/end				mem	obj	A				0,00	0,00	0,00
	Cost			Kosten	Mem	obj					0,00	0,00	0,00

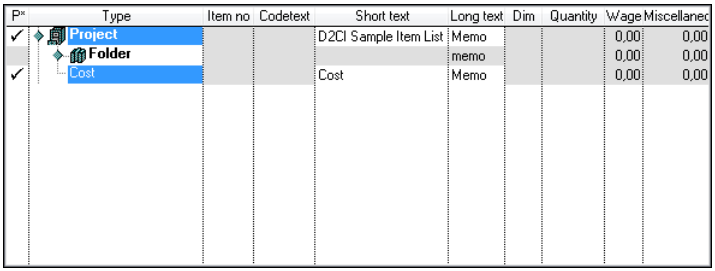
While you edit a project using a project-specific data sheet, Allplan Quantities buffers your edits line by line. This means that, each time you enter or modify data, these will be stored temporarily in the RAM of your computer. The changes are not written to the database until you exit the line to edit another line. When you are working in a network, this mode allows multi-user access; in other words, the project can be opened and edited on several computers simultaneously.

Note: For a general description of how to set up and use project-specific data sheets, see the section entitled "Using Data Sheets". The "Columns in project-specific data sheets" section provides further information on the columns of these data sheets and their contents. More detailed information on creating and editing data records is provided in the "Basics of Working with Data Records" section.

Calculation Elements in Data Sheets

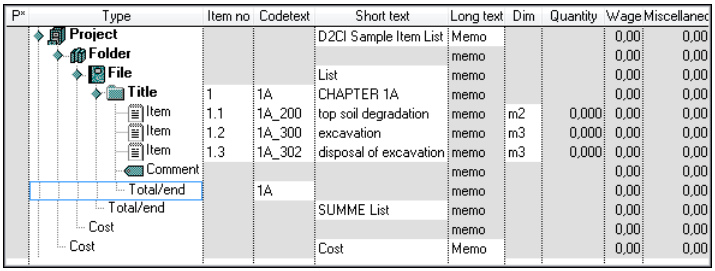
As you work in Allplan Quantities, you will find that the **Master** and **Element Master** data sheets as well as the project-specific data sheets contain similar hierarchic structures, which consist of data lines opening levels in the hierarchy and data lines closing levels in the hierarchy.

Data lines opening levels in the hierarchy never exist on their own. Rather, they are always complemented by the associated data lines closing levels in the hierarchy. When, for example, you create a new project and open the data sheet, the '**Project**' entry has already been created in the first data line and the '**Cost**' entry in the second data line. This means that the '**Cost**' data line closes the '**Project**' level.



All the data you enter now is integrated in the hierarchy defined and delimited by "Project - Cost". Each time you create a new data record in the hierarchy, you will find that the associated data line closing this level in the hierarchy - '**Total**' or '**Cost**' - is created automatically.

These additional data lines closing the hierarchy are always appended to the end of a level in the hierarchy. When, for example, you place the insertion marker in a sum line and create a new item, this item is inserted in this line and consequently, the sum line automatically moves down a line.



P	Type	Item no	Codetext	Short text	Long text	Dim	Quantity	Wage	Miscellaneo
	Project			D2CI Sample Item List	Memo			0,00	0,00
	Folder				memo			0,00	0,00
	File			List	memo			0,00	0,00
	Title	1	1A	CHAPTER 1A	memo			0,00	0,00
	Item	1.1	1A_200	top soil degradation	memo	m2	0,000	0,00	0,00
	Item	1.2	1A_300	excavation	memo	m3	0,000	0,00	0,00
	Item	1.3	1A_302	disposal of excavation	memo	m3	0,000	0,00	0,00
	Comment				memo			0,00	0,00
	Total/end		1A		memo			0,00	0,00
	Total/end			SUMME List	memo			0,00	0,00
	Cost				memo			0,00	0,00
	Cost			Cost	Memo			0,00	0,00

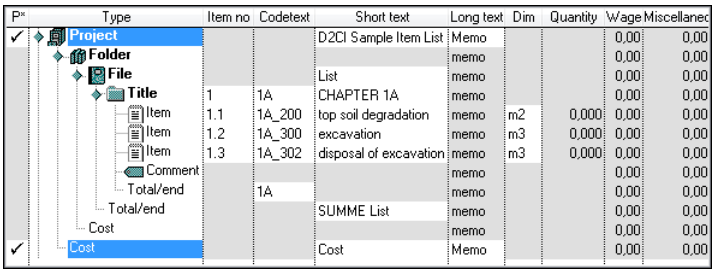
As you can see in the illustration, the '**Project**', '**Folder**', '**File**' and '**Title**' data lines open a level in the hierarchy.

The '**Total/End**' and '**Cost**' data lines close a level in the hierarchy.

The data lines of the lowest level in the hierarchy - '**Item**' and '**Comment**' – cannot open a new level in the hierarchy. Consequently, there are no associated data lines closing this level.

"Project - Cost" Calculation Element

The "Project - Cost" combination opens the hierarchy in each calculation data sheet. All the other levels in the hierarchy (e.g. folders or files) are delimited by this combination, which exists just once in each calculation data sheet.

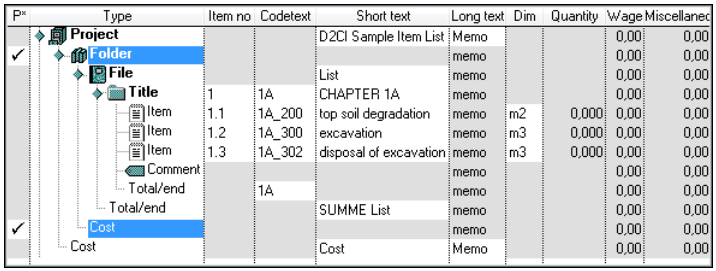


P	Type	Item no	Codetext	Short text	Long text	Dim	Quantity	Wage	Miscellaneo
✓	Project			D2CI Sample Item List	Memo			0,00	0,00
	Folder				memo			0,00	0,00
	File			List	memo			0,00	0,00
	Title	1	1A	CHAPTER 1A	memo			0,00	0,00
	Item	1.1	1A_200	top soil degradation	memo	m2	0,000	0,00	0,00
	Item	1.2	1A_300	excavation	memo	m3	0,000	0,00	0,00
	Item	1.3	1A_302	disposal of excavation	memo	m3	0,000	0,00	0,00
	Comment				memo			0,00	0,00
	Total/end		1A		memo			0,00	0,00
	Total/end			SUMME List	memo			0,00	0,00
	Cost				memo			0,00	0,00
✓	Cost			Cost	Memo			0,00	0,00

The data records that are directly subordinate to the project level in the hierarchy are totalized both in the project line and in the cost line.

"Folder - Cost" Calculation Element

The ”Folder - Cost” level, which can be inserted between the project level and the file level in the hierarchy, allows you to refine the hierarchic structure of projects (e.g. taking into account various construction stages, sections or components).

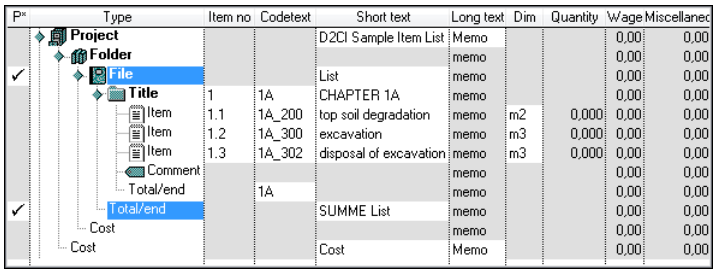


P*	Type	Item no	Codetext	Short text	Long text	Dim	Quantity	Wage	Miscellanec
	Project			D2CI Sample Item List	Memo			0,00	0,00
✓	Folder				memo			0,00	0,00
	File			List	memo			0,00	0,00
	Title	1	1A	CHAPTER 1A	memo			0,00	0,00
	Item	1.1	1A_200	top soil degradation	memo	m2	0,000	0,00	0,00
	Item	1.2	1A_300	excavation	memo	m3	0,000	0,00	0,00
	Item	1.3	1A_302	disposal of excavation	memo	m3	0,000	0,00	0,00
	Comment				memo			0,00	0,00
	Total/end		1A		memo			0,00	0,00
	Total/end			SUMME List	memo			0,00	0,00
✓	Cost				memo			0,00	0,00
	Cost			Cost	Memo			0,00	0,00

The elements that are directly subordinate to the ‘**Folder**’ level in the hierarchy are totalized in the ‘**Folder**’ line and the associated cost line.

"File - Total/End" Calculation Element

The ”File – Total/End” level cannot include any further files. A folder or project, on the other hand, can contain several files. Files are always subordinate to the project or folder line.

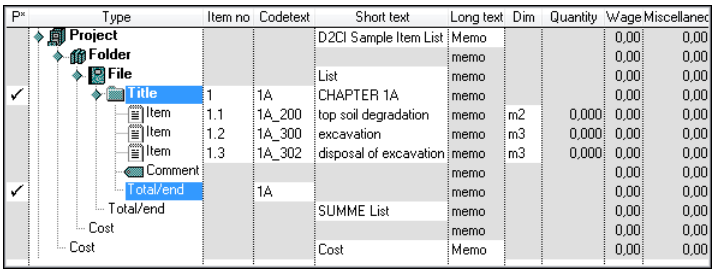


P*	Type	Item no	Codetext	Short text	Long text	Dim	Quantity	Wage	Miscellanec
	Project			D2CI Sample Item List	Memo			0,00	0,00
	Folder				memo			0,00	0,00
✓	File			List	memo			0,00	0,00
	Title	1	1A	CHAPTER 1A	memo			0,00	0,00
	Item	1.1	1A_200	top soil degradation	memo	m2	0,000	0,00	0,00
	Item	1.2	1A_300	excavation	memo	m3	0,000	0,00	0,00
	Item	1.3	1A_302	disposal of excavation	memo	m3	0,000	0,00	0,00
	Comment				memo			0,00	0,00
	Total/end		1A		memo			0,00	0,00
✓	Total/end			SUMME List	memo			0,00	0,00
	Cost				memo			0,00	0,00
	Cost			Cost	Memo			0,00	0,00

The elements that are directly subordinate to the ‘**File**’ level in the hierarchy are totalized in the ‘**File**’ line and the associated sum line.

"Title - Total/End" Calculation Element

Titles refine a file's structure. The "Title – Total/End" level can include any number of subordinate titles (e.g. subtitles).

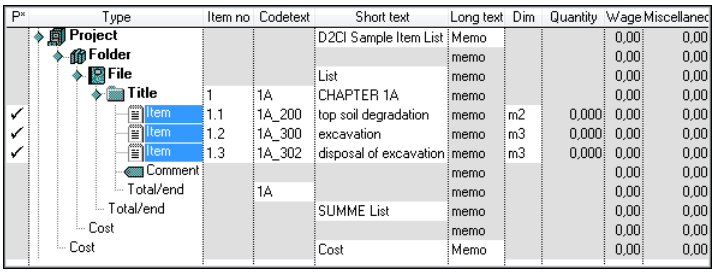


P*	Type	Item no	Codetext	Short text	Long text	Dim	Quantity	Wage	Miscellanec
	Project			D2CI Sample Item List	Memo			0,00	0,00
	Folder				memo			0,00	0,00
	File			List	memo			0,00	0,00
✓	Title	1	1A	CHAPTER 1A	memo			0,00	0,00
	Item	1.1	1A_200	top soil degradation	memo	m2	0,000	0,00	0,00
	Item	1.2	1A_300	excavation	memo	m3	0,000	0,00	0,00
	Item	1.3	1A_302	disposal of excavation	memo	m3	0,000	0,00	0,00
	Comment				memo			0,00	0,00
✓	Total/end		1A		memo			0,00	0,00
	Total/end			SUMME List	memo			0,00	0,00
	Cost				memo			0,00	0,00
	Cost			Cost	Memo			0,00	0,00

The elements that are directly subordinate to the relevant title in the hierarchy are totalized in the **'Title'** line and the associated sum line.

"Item" Calculation Element

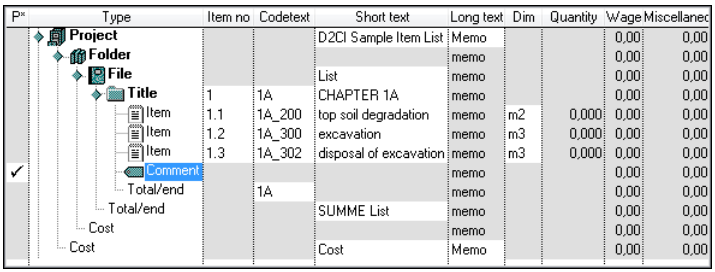
Items are data records of the lowest level in the hierarchy. You cannot create any items that are subordinate to items. Consequently, items consist of one line only (an associated sum line does not exist!).



P*	Type	Item no	Codetext	Short text	Long text	Dim	Quantity	Wage	Miscellanec
	Project			D2CI Sample Item List	Memo			0,00	0,00
	Folder				memo			0,00	0,00
	File			List	memo			0,00	0,00
	Title	1	1A	CHAPTER 1A	memo			0,00	0,00
✓	Item	1.1	1A_200	top soil degradation	memo	m2	0,000	0,00	0,00
✓	Item	1.2	1A_300	excavation	memo	m3	0,000	0,00	0,00
✓	Item	1.3	1A_302	disposal of excavation	memo	m3	0,000	0,00	0,00
	Comment				memo			0,00	0,00
	Total/end		1A		memo			0,00	0,00
	Total/end			SUMME List	memo			0,00	0,00
	Cost				memo			0,00	0,00
	Cost			Cost	Memo			0,00	0,00

"Comment" Calculation Element

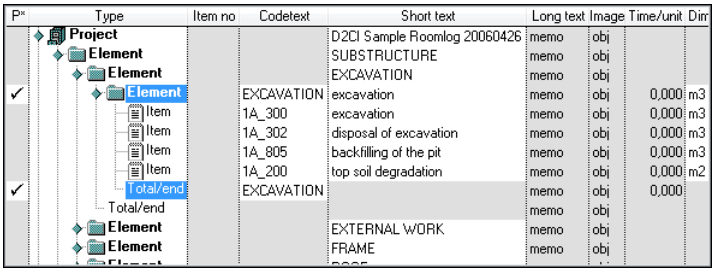
As with items, comments are data records of the lowest level in the hierarchy. You cannot create any comments that are subordinate to comments.



P"	Type	Item no	Codetext	Short text	Long text	Dim	Quantity	Wage	Miscellanec
	Project			D2CI Sample Item List	Memo			0,00	0,00
	Folder				memo			0,00	0,00
	File			List	memo			0,00	0,00
	Title	1	1A	CHAPTER 1A	memo			0,00	0,00
	Item	1.1	1A_200	top soil degradation	memo	m2	0,000	0,00	0,00
	Item	1.2	1A_300	excavation	memo	m3	0,000	0,00	0,00
	Item	1.3	1A_302	disposal of excavation	memo	m3	0,000	0,00	0,00
✓	Comment				memo			0,00	0,00
	Total/end		1A		memo			0,00	0,00
	Total/end			SUMME List	memo			0,00	0,00
	Cost				memo			0,00	0,00
	Cost			Cost	Memo			0,00	0,00

"Element - Total/End" Calculation Element

The "Element – Total/End" level in the **Element Schedule** and **Element Master** data sheets can be considered equivalent to files and titles in other data sheets.



P"	Type	Item no	Codetext	Short text	Long text	Image	Time/unit	Dim
	Project			D2CI Sample Roomlog 20060426	memo	obj		
	Element			SUBSTRUCTURE	memo	obj		
	Element			EXCAVATION	memo	obj		
✓	Element		EXCAVATION	excavation	memo	obj	0,000	m3
	Item		1A_300	excavation	memo	obj	0,000	m3
	Item		1A_302	disposal of excavation	memo	obj	0,000	m3
	Item		1A_805	backfilling of the pit	memo	obj	0,000	m3
	Item		1A_200	top soil degradation	memo	obj	0,000	m2
✓	Total/end		EXCAVATION		memo	obj	0,000	
	Total/end				memo	obj		
	Element			EXTERNAL WORK	memo	obj		
	Element			FRAME	memo	obj		

It is often necessary to create mixed hierarchic structures in the Element Schedule and Element Master data sheets (for example, "Story" element, "Room" element including the "Chair" item and an additional element - "Computer"; this "Computer" element in turn contains the items "Processor", "Screen" and "Keyboard").

The elements that are directly subordinate to the relevant title in the hierarchy are totalized in the 'Title' line and the associated sum line.

Memo Fields and Text Windows

Memo fields cannot be filled in directly in data sheets; in other words, you cannot make any entries in the columns of memo fields. They are rather used as placeholders for text. Therefore, these data fields are simply characterized by the entry ′**Memo**′ or ′**memo**′ in data sheets.

The difference in spelling – ′**Memo**′ or ′**memo**′ – indicates whether or not text has already been assigned to a memo field: ′**Memo**′ fields include text while ′**memo**′ fields are still empty.

When you open a memo field, the hidden text associated with this field is displayed in a separate window (also referred to as a text window). You can enter any text in a text window. This text can then be included in printouts of projects or overviews if an appropriate report has been selected.

For example, memo fields are included in the **Construction project**, **Client** and **Note** columns of the **Project overview** data sheet as well as in the **Long text** column of project-specific data sheets.

When you activate the search tool in an open text window, this tool offers an advanced option: you can search AND replace any alphanumeric character string. Starting at the current position of the insertion marker, the search tool scans text from top to bottom. The first occurrence of the specified term is selected. The selected characters can be replaced automatically with a different term, if specified.

You can use all Windows fonts installed on your computer for the on-screen display of text in text windows. In addition, you can choose from standard, italic, bold and bold/italic styles. The font sizes that are available to you depend on the fonts you have installed.

Note: You can change the appearance of fonts for the **on-screen display** of text windows using the **Data sheets** tool on the **Extras** menu.

Important!
To modify the appearance of fonts for **printouts**, use the report designer.

Object Fields and Object Windows

Object fields are data fields which only contain an ´**Obj**´ or ´**obj**´ entry in data sheets. When you double-click on an object field, the hidden object associated with this field is displayed in a separate window (also referred to as an object window).

The difference in spelling – ´**Obj**´ or ´**obj**´ – indicates whether or not an object has already been assigned to the respective object field: ´**Obj**´ fields include an object while ´**obj**´ fields are still empty.

Object fields are arranged in the **Image** column of data sheets.

Note: If the **Image** column is not displayed in your data sheet, close the data sheet and reopen it using the **ADMINISTRATOR** scheme. If you are using a user-defined scheme, add this column to the scheme (cf. "Add Normal Columns to Data Sheets").

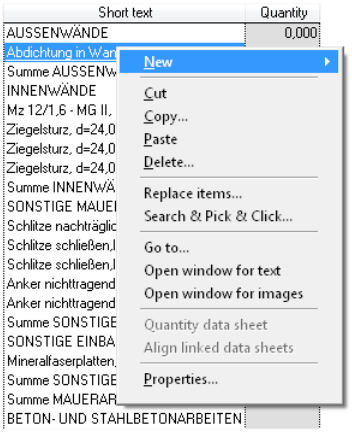
Shortcut Menu

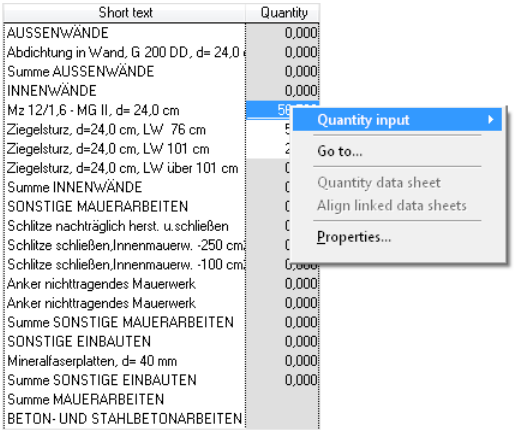
In addition to the menus (see "Menu Bar in Allplan Quantities" on page 32), toolbars and shortcuts, Allplan Quantities also provides shortcut menus as an alternative way to access tools and execute commands.

Shortcut menus have the advantage that they can be accessed directly and offer a context-sensitive set of tools and commands. This means that the available choices always depend on the state or context from which you open the shortcut menu. To give you an example, if you are setting up a file and the insertion marker is in the **Short text** column, you will get a different shortcut menu than if you are calculating quantities and the insertion marker is in a column of the quantity block. Not all input fields have a shortcut menu, though. When right-clicked, some open a dialog box instead (e.g. the **Dimension input help** dialog box opens from the **Dim** column). In other input boxes, no functionality is assigned to the right mouse button (e.g. in memo fields).

Note: The tools and commands provided on the shortcut menus are the same as those you can access or select through the menus, shortcuts or toolbars.

Here you can see the shortcut menus for the **Short text** column (left) and the **Quantity** column (right), both opened from the **Calculation** data sheet:



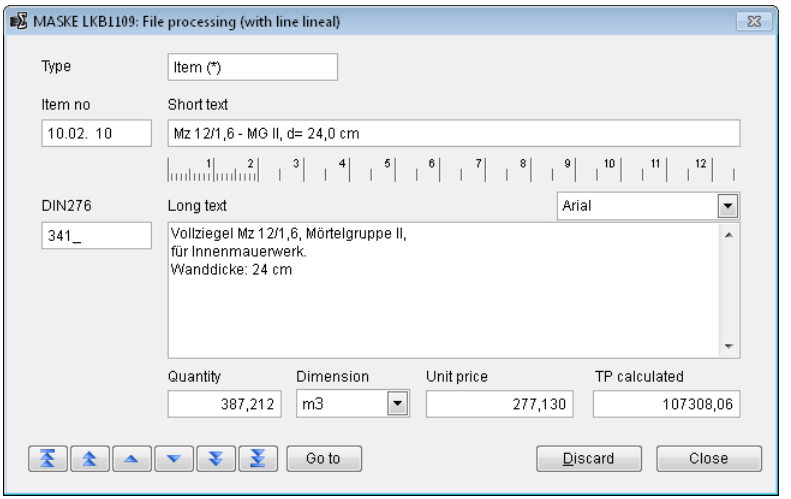


Processing Templates

Allplan Quantities provides a number of processing templates for editing master text and files. As with data sheets, processing templates for all the phases of a project are available; this means that you can select the processing template that best suits your current task.

Each processing template already contains all data from a data record that is relevant to a specific phase. Therefore, processing templates provide an alternative method for displaying data sheets, allowing you to focus on the data of a specific data record (e.g. item) for a certain processing phase.

When you open a processing template, the values and texts from the data record in which the insertion marker is currently placed are entered in the processing template and can then be edited.



By using the six buttons in the lower left corner of each processing template, you can retrieve the data of a different data record for display in the processing template without having to close and re-open it for the new data record:

Icon	Function
	Display the data of the first data record in the data sheet.
	Display the data of the previous data record on same level in the hierarchy.
	Display the data of the previous line.
	Display the data of the next line.
	Display the data of the next data record on same level in the hierarchy.
	Display the data of the last data record in the data sheet.

Important!
When you display data of a different data record by using buttons or by closing a processing template, the data of the current data record in the data sheet will be updated. So before you display data of a different data record or close a processing template, check whether you really want to keep the changes you have made to the current data record and apply them to the data sheet.

If you do not want to apply the changes you have made in the processing template, discard them before you close the processing template or display a different data record.

Macros

Allplan Quantities provides a number of macros that facilitate more complex tasks. As with data sheets, macros are available for all the phases of a project; this means that you can use the macro that best suits the current task.

Not all macros are helpful or required in all phases/data sheets. For this reason, macros are usually associated with specific phases/data sheets, i.e. macros that are, e.g., available in the **Calculation** data sheet are not automatically available in all other phases.

However, it is possible to copy macros from one phase/data sheet to another phase/data sheet. However, please note the following:

Important!
Please note that macros that have been copied to a different phase might need to be adjusted to that phase. The program does not automatically analyze whether it makes sense to copy the macro or whether its contents need to be adjusted!

Wizards

Wizards guide you comfortably through unusual tasks.

Just like macros, not all wizards are helpful or required in all phases/data sheets. For this reason, some of the wizards are

associated with specific phases/data sheets, i.e. a wizard that is available, e.g., in the **Calculation** data sheet is not automatically available in all other phases.

The following wizards are available:

Wizard	Function	Requirements
Print user settings	Prints the user settings of the current user or of all Allplan Quantities users set up in the Allplan Quantities user manager.	All data sheets and dialog boxes are closed.
Copy reports	Copies reports across phases.	Available in all phases/data sheets.
Integrate DIN-Classification	Copies the entire DIN 276 classification to the new project (cf. "Copying the DIN 276 Cost Classification in Its Entirety").	The **DIN 276 Estimation** or **DIN 276 Calculation** data sheet is active and the **DIN 276 CLASSIFICATION** project has been installed.
Create data for MS Project	Copies the data relevant for scheduling with MS Project to the Clipboard from where they can be inserted into MS Project (cf. "Scheduling").	The **Calculation** data sheet is active.
Allocate variables of elements	Creates a table where you can easily assign values to all variables available in an element schedule (cf. "Calculating Element Quantities" and "Calculating Quantities by Using Variables").	The **Element schedule** data sheet is active.
Copy macros	Copies macros across phases (cf. "Copying Macros").	Available in all phases/data sheets.
Diversify display of schemes	*Temporarily* changes the representation (grid lines and font) of the current data sheet.	Any data sheet is open in a scheme *without tabs*.
Integrate Ö-Norm B 1801 structure	Copies the entire classification (or "structure") in compliance with Ö-Norm B 1801 to the current project.	The **DIN 276 Estimation** or **DIN 276 Calculation** data sheet is active and the **Ö-Norm B 1801 structure** project has been installed.

User-Definable Default and Data Sheet Settings

User-definable default settings

In Allplan Quantities, you can select various defaults that are saved permanently.

For example you can specify

- in which paths and directories the data is stored and saved,
- whether and when prices, quantities and other entries in data sheets are calculated and/or updated,
- whether a selection dialog box is displayed when data records are copied or deleted,
- whether projects are optimized automatically when they are opened,
- whether you are running Allplan Quantities in a network.

These default settings can be defined in the **Adjustments** dialog box.

User-definable data sheet settings and column definitions

Besides the default settings, you can also define various data sheet settings (font, columns, column sequence, column headers etc.) for the data sheets. You can save the settings in a custom scheme, so that you can open the data sheets with the settings best suited for your requirements right away.

Besides these custom data sheet settings, each data sheet provides several free columns, which you can use as required. For example, you can create columns for a separate key number or a second set of long text (comments on items or the translation of long text into a different language).

The settings for the data sheets are defined in the **Scheme** dialog box.

Catalogs for Quantity Takeoff Operations Using Graphics

Catalogs provide the common basis for graphical quantity takeoff operations using Allplan and Allplan Quantities. These catalogs, which contain specification descriptions as item data, are created and maintained using Allplan Quantities. As you work with Allplan, you can assign individual items (= item method) or entire item packages (= element method) from catalogs to quantities generated.

There are different ways of exchanging data between Allplan Quantities and Allplan. The following descriptions explain the philosophy behind graphical quantity takeoff operations. Please note that the format of this manual puts a limit on the number of options we can present. With the wide variety of possibilities offered, you can create even very complex catalogs.

When defining materials in Allplan, you can access all the projects available in the Allplan Quantities directory you have set. The way in which materials are defined varies depending on the catalog type (item catalogs, master file or element catalogs) selected in Allplan Quantities (cf. section entitled ”Defining Materials in Allplan”). Please note the special features of the individual catalogs.

Important!
You can specify the catalog from which the elements or items are to be taken. This allows you to select the catalog that best suits your needs.

Make sure that you are dealing with the correct catalog when importing CAD data into Allplan Quantities later. Otherwise, the data may not be processed correctly.

It is not advisable to mix catalogs. Before you begin, decide on the specification descriptions you require in Allplan and set up an appropriate "CAD catalog" in Allplan Quantities.

Some notes on the individual catalogs:

a) Item catalogs

When you select materials in Allplan, item catalogs are marked with an (S) after the project name (exception: master file).

CAD data generated based directly on item catalogs can be imported into Allplan Quantities by using the "CAD XPad -> Project" tool when you import the data for the first time. When updating an existing file, use the "CAD XUpdate" tool.

It is essential to make sure that you have specified all the catalogs needed for the import; otherwise, the quantities may not be assigned correctly. The best approach therefore is to create a special, CAD-specific master file based on the items of the item catalogs.

b) Master file

As a master file is maintained like a "normal" project file, it is marked with a (P) after the project name when you select materials in Allplan.

You can also use the "CAD XUpdate" tool to import CAD data into a master file (or a copy of a master file). You can then quickly and easily delete items that are not used or associated with quantities.

c) Element catalogs

When you select materials in Allplan, element catalogs are marked with an (E) (= project-independent element catalog) or with a (R) (= project-specific schedule) after the project name.

Here, too, you can use the "CAD XUpdate" tool provided by Allplan Quantities to import CAD data generated based on element catalogs. This data can be imported into a copy of the master file, for example.

Setup and Structure of CAD Catalogs

Why are special CAD catalogs useful?

When defining materials in Allplan, you can access all the projects available in Allplan Quantities in order to select specification descriptions from different catalogs. In spite of significant advantages, this has several disadvantages, however:

- It can happen that you need to open several catalogs and perform tedious searches until you find the item you want to use.
- When importing CAD data into Allplan Quantities, you need to specify the catalogs from which you have taken items (disadvantage: you must remember the catalogs you have used). As an alternative, you can also specify all existing catalogs (disadvantage: doing so can increase the time required for import).

To avoid these disadvantages, you can use special CAD catalogs customized to meet the requirements imposed by design tasks. These catalogs, which are created based on existing item catalogs, have the following advantages:

- CAD catalogs only contain items and/or elements that are relevant to the design, providing quicker access to items/elements.
- When importing CAD data, you only need to specify a single catalog containing all necessary items.
- Items can be set up to suit the needs of designers: for example, the specification descriptions of plaster *and* paint can be used to generate a single element named "Wall with plaster and paint". Although these specification descriptions belong to different trades in the item catalogs, you do not have to perform time-consuming searches.

Type and structure of a CAD catalog

It is worth spending time carefully planning a CAD catalog's structure before even drawing the first line in Allplan: define the materials you want to use or decide on the rooms' equipment properties, for example.

Combine the specification descriptions you require for these materials and equipment properties in a separate CAD item catalog (= master file). You can even use this catalog to define materials in Allplan by assigning individual items to components (= item method).

In contrast to pure CAD item catalogs, however, CAD element catalogs have significant advantages:

- You can combine several items in elements when defining materials using Allplan. You can then transfer these ”item packages” in their entirety by making a single assignment in the CAD system (= element method).
- The same applies for the ”Room” tool in Allplan.
- Using elements, you can create hierarchies of any structure. This allows you to generate well-designed CAD catalogs.
- Element catalogs can contain several instances of an item although duplicate data storage is avoided. For example, the ”Plaster” item can be assigned to both exterior and interior wall elements.

The CAD catalog you set up should thus be customized to meet the requirements of the design tasks and define elements by combining items from the item catalog.

Important!
The item catalog (= master file) serves as the basis for the element catalog. Prior to creating the item catalog, spend some time thinking about how best to structure it and, if possible, you should not make changes afterwards.

Element catalogs only contain copies of the actual items. When CAD data is imported into Allplan Quantities, however, the items are taken form the item catalog. It is therefore important that you update and maintain the items in the item catalog. Any changes you make to items in element catalogs are not recognized.

Furthermore, you can only copy the current prices from the item catalog to an element catalog when the elements in the element catalog you want to use have been created based on items of the item catalog.

Creating a CAD item catalog (master file) based on an element catalog

Allplan Quantities offers the option to automatically generate trade-specific files based on element catalogs (element masters or element schedules).

If you have created a CAD element catalog based on items from different master catalogs, you can use this element catalog to generate a CAD item catalog, which is necessary for a correct import of quantities.

Code Text for Items and Elements

Code text is a freely definable combination of characters that needs to be defined for each item/element. It is essential that a **unique** code text be assigned to each item/element. You can manage code text in Allplan Quantities using the **Code text** column.

Whereas the item number of any item may change in each file, code text always stays the same. This means that code text serves as the unique identifier for items in master catalogs, files and element schedules.

Due to its properties, code text is used as an ”assignment key”. In other words, materials, quantities and specification descriptions are assigned based on code text: first in Allplan Quantities by defining ”Item/Element -> Code text”, next in Allplan by assigning ”Material = Code text” and then again in Allplan Quantities by specifying ”Code text/Quantity -> Specification description/Quantity”.

Important!
Code text of items must be entered in the item catalog. You should ensure that each item includes a **unique** code text. Unique means that each combination of characters exists just **once**. You should not modify code text later.

Note: Code text of an item can consist of a *maximum of 16 characters* and that of an element of *15 characters maximum*. Code text may include letters, numbers and "-./_".

ATTENTION!
However, it must *not* contain *blanks*!

For example, you can create code text based on a number key or character sequence:

Example 1:

Code text	**stands for ...**
012020110	the "Vertically perforated brick 36.5" item in its entirety
012020110	trade 012 "Masonry"
012**020**110	the second subtitle "Exterior walls"
012020**110**	the consecutive item number; increments of ten are useful as you can add items later without having to adjust numbering.

Example 2:

Code text	**stands for ...**
012VPB365	the "Vertically perforated brick 36.5" item The code text indicates the contents of the item.

Example of a code text key in an item catalog:

Title	012	012	MAUERARBEITEN
Title	012011	012011	GRÜNDUNGEN
Item	012021	012021	AUSSENWÄNDE
Item	012021010	012021010	Abdichtung in Wand, G 200 DD, d= 24,0 cm
Item	012021020	012021020	Abdichtung in Wand, G 200 DD, d= 36,5 cm
Item	012021025	012021025	Vollziegel VMZ 20/1,6, MG II, d= 24 cm
Item	012021030	012021030	Hlz 12/1,0 - MG II, d= 36,5 cm
Item	012021050	012021050	Hlz 12/1,4 - MG II, d= 36,5 cm
Item	012021070	012021070	Hlz 20/1,8 - MG II, d= 24,0 cm

CAD Attributes for Items

Items in CAD catalogs can be associated with additional attributes which have already been defined in Allplan and which are necessary for correct quantity takeoff operations using Allplan:

- You can use the **Trade** option to define regulations based on which openings, niches, reveals etc. are analyzed and evaluated. You can specify different regulations for each trade.

  The trade that is to be applied to an item for evaluation and analysis is matched to the trade list in Allplan by transferring the trade and trade number from Allplan.

- In the element catalog, you can define **formulas** for all items combined in elements. This ensures that item quantities are always calculated correctly even when different regulations have been defined for individual items (e.g. wall area in m² and wall length in m).

  Important!
  To fully exploit the benefits of elements, you should always define formulas for items assigned to elements. If you have not entered formulas, the quantities of the items in question cannot be determined.

  When defining formulas, you can enter all the units required to calculate the relevant component in Allplan. These units are presented for selection. Customized formulas can also be defined.

  Example:
  A wall with a tiling pattern that is max. 1.50 m high. The formula might look like this: m*1.50

When editing the CAD attributes, you can use an attribute definition as a template and simply transfer it from one item to another.

Note: An overview of the attributes is provided in the online help for Allplan, in the chapter entitled ”Attributes of Architectural Elements”.

Dynamic Code Text for Items

”Dynamic code text” is a combination of code text and CAD attributes. This means that a predefined Allplan attribute is added as a variable to code text of items in the **element catalog** (*not* in the item catalog). Only when you create quantity takeoff schedules are these variables replaced by the actual values defined by the dimensions of the Allplan components. This completes the generation of ”dynamic code text”.

Code text created in this manner serves as an ”assignment key” when files/element schedules are generated and/or the CAD XUpdate tool is executed: item quantities in quantity takeoff schedules are assigned to specification descriptions in the item catalog based on this code text.

Important!
The code text must be exactly the same in both the quantity takeoff schedule and the item catalog. Otherwise, the CAD XUpdate tool returns error messages, which are saved in the `allright.err` file.

You can use any of the attributes defined in Allplan as variables. However, the following attributes are particularly important:

- Length
- Width
- Height
- Volume

When defining the formula for ”dynamic code text”, be sure to note the following: a **+ character** must be used to append the attribute(s) to the end of the basic code text of an item. These attributes are then replaced by the component dimensions. The basic code text and the variables must be separated by a **hyphen**; constant parts of the code text must be enclosed in **quotation marks**.

Below is an example to illustrate the syntax of ”dynamic code text” in an **element catalog**:

**”013.060000-”+ROUND(length*100;1;5)+”-
”+ROUND(thickness*100;1;5)**

”013.060000-”	constant part: basic code text of the item (e.g. a general description of reinforced concrete columns) plus hyphen
+	instructs the program to add the next term
ROUND	instructs the program to round off the value
Length / thickness	variables: CAD attributes that are replaced by the actual component dimensions
*100	conversion of unit to meters and centimeters
1	number of decimal places
5	round-off value of the last digit
Example:	Thickness of the component in Allplan = 0.257 cm ROUND(0.257*100;1;5) = 26 For example, when designing a column that is 0.365 m long and 0.405 m thick, this ”dynamic code text” yields the following final code text in the quantity takeoff schedule: **013.060000-36.5-40.5**

The code text must be defined in this manner in the **item catalog**. This ensures that the quantities specified in the quantity takeoff schedule are assigned correctly to items when files/element schedules are generated.

Creating a CAD Catalog as an Element Catalog

The sections that follow explain how to create custom CAD catalogs for graphical quantity takeoff operations in Allplan Quantities.

As these catalogs are very complex and setting them up takes much time, Nemetschek's Design2Cost initiative offers you a comprehensive database of predefined catalogs and files, which are provided in Allplan IntelligenteBauDaten (= Allplan IBD).

For more information, please visit our website at http://www.design2cost.de or contact your Nemetschek sales partner.

Defining Materials in Allplan

General information

You can assign materials to architectural components (walls, columns, slabs etc.) while designing using Allplan. If you want, you can add rooms to which you assign further material definitions based on finishing surfaces.

Not only do you have the option to assign individual items to architectural components and rooms in a single step but you can also assign entire elements together with all the associated items (provided you have prepared the element catalogs in an appropriate manner). If you are using rooms, you can quickly and easily define finishing surfaces consisting of multiple layers by selecting entire elements right from the beginning.

In addition to basic items such as ”brick” and ”plaster”, a wall can be assigned more items for paint or tiles, for example. You can even apply bituminous coating (for sealing against dampness) to the ”wall” element despite the fact that the quantities of bituminous coating are calculated based on a different regulation. To ensure that the quantities of the individual items are always calculated correctly (e.g. wall area in m^2 for plaster and paint; wall length in m for bituminous coating), you can define formulas for all items in Allplan Quantities (more information is provided in the section entitled ”CAD Attributes for Items”.

Whenever you define materials, you access the catalogs you have prepared using Allplan Quantities.

Note: If you are working with elements, it is important that you specify the element catalogs whose elements you want to use when defining materials in Allplan (see next section entitled ”Define Research Projects”).

Research projects

”Research projects” are projects the program scans for elements while creating quantity takeoff schedules. In other words, the material requirements of these projects are ”researched”. The sequence in which you specify element masters and element schedules as research projects also defines the research sequence (from top to bottom).

As the items of elements found can be analyzed only, it is important that you only define materials based on element catalogs that are actually used for creating quantity takeoff schedules.

Materials for architectural components

Of course, you can select an individual item in an item catalog when defining materials for architectural components. But it is much easier and more efficient to select entire elements using element catalogs you have prepared for this purpose (cf. section entitled ”Setup and Structure of CAD Catalogs”).

Materials for finishing and special surfaces

You can also create finishing surfaces of rooms and special surfaces that consist of one or more individual items. Here, too, it is much easier and more efficient to select entire elements using element catalogs you have prepared for this purpose (cf. section entitled ”Setup and Structure of CAD Catalogs”).

Important!
When defining finishing and special surfaces, be sure to note the following: Floor and vertical surfaces (as ”normal” finishing surfaces) take special surfaces into account. This means that floors or vertical surfaces defined as special surfaces have a higher priority than ‘normal’ finishing surfaces defined when entering rooms and consequently, these special surfaces will intersect normal finishing specs at points where they meet (e.g. tiling patterns in plastered and painted walls).

Component numbers

You can assign component numbers to all drawing elements in finished drawings. This facilitates subsequent processes of transferring data to and analyzing and evaluating data in Allplan Quantities.

Quantity Takeoff Operations in Allplan

When you have finished assigning materials from the Allplan Quantities material catalogs to components, you can now create a quantity takeoff schedule based on the data obtained from quantity takeoff operations and transfer this schedule to Allplan Quantities.

Important!
If you are working with elements, it is important that you specify the research projects before you create quantity takeoff schedules (cf. section entitled ”Define Research Projects”). This ensures that all the data is processed correctly, which means that item quantities are calculated and assigned to the appropriate specification descriptions.

You can define which drawing files or components are to be analyzed during quantity takeoff operations in two ways:

- **Selectively** - by choosing specific drawing files and the objects they contain.
- **Globally** - based on several drawing files assembled using a ”building list”. For this, the drawing files in question simply have to be selected in the project structure (you do not have to set them to active or edit mode).

  Allplan offers an efficient approach for generating quantity takeoff schedules encompassing entire structures or buildings. You can structure a project’s drawing files in a ”building list” using the following structural levels to assist you: ”Structure”, ”Building” and ”Story”.

Further quantity takeoff principles:

- Quantity takeoff operations work on a cross-file basis (i.e., you are not restricted to the information in a single drawing file): rooms and the corresponding walls with windows and doors do not have to be in the same drawing file. The system will nevertheless recognize door and window openings as belonging to the room and take these into account during calculations.
- Neighbor relationships are taken into account:
  - Doors and windows are assigned to the corresponding room.
  - Door openings are assigned to rooms (depending on the direction of swing/opening). The floor covering in the door opening in the adjacent room is included in the calculation.
  - Slab recesses and openings are recognized as such.
  - Walls recognize each other.

Importing Allplan Quantity Takeoff Schedules into Allplan Quantities

As the possible applications for graphical quantity takeoff operations are manifold, there are a lot of ways in which you can import quantity takeoff schedules into Allplan Quantities.

Important!
To make sure that all the data is imported correctly, you have to specify the item catalog you have used for defining materials.

The section that follows shows how to import a quantity takeoff schedule based on a material definition using an element catalog (that was created based on a master file).

The resulting quantity takeoff schedules are imported into a *copy* of the master file. This ensures that all the items used in Allplan are available.

Creating files

You can create files directly from quantity takeoff schedules. The item catalog you have used for defining materials serves as the basis for these files.

Before you import the quantity takeoff schedules, you need to copy the item catalog (= master file) whose items you have used to set up the element catalog. The original master file is retained. You can then import the quantity takeoff schedules into this copy.

Updating quantities in existing files

When you have already created files, you can import the updated CAD data directly into existing files. This way, you can quickly and easily update quantities.

Please note the following:

- Modified quantity calculations are overwritten.
- Quantity calculations that are no longer required (e.g. quantity calculations associated with components you have deleted in the meantime) are automatically removed from files.
- Additional quantity calculations (when you have drawn more walls, for example) are added.
- Specification descriptions that are no longer used are retained as "items with zero quantities" in files. If necessary, you can mark and then delete them using the **Mark zero quantity** tool on the **Calculation** menu.
- New specification descriptions are entered in the log file and can be added "manually" to files (cf. section entitled "Checking the Log File").
- Items and quantity calculations you have entered manually in files – i.e. that have not been transferred from Allplan – are unaffected by this operation.
- Items you have locked are not changed.

Checking the log file

The log file shows the materials and/or quantities that could not be assigned correctly during the import. Check the log file entry by entry, make the necessary corrections and then update the quantities once again.

This way, you can ensure that the file contains all the materials used in Allplan.

Tendering

The ”Tendering” chapter deals in detail with all the topics pertinent to tendering using Allplan Quantities.

In particular, you will learn how to

- Create files
- Define item categories and item types
- Set up files
- Insert sketches in files
- Calculate file quantities
- Calculate the total costs of files or projects
- Print files
- Back up files

Creating Files

There are different ways of creating files in Allplan Quantities. Files can be based on custom specification descriptions, master data (e.g. user-defined master catalogs or master files, predefined text such as sirAdos text) or on standard service catalogs. If you created files for a similar construction project some time ago, you could also copy the relevant project and then modify the specification descriptions.

A combination of custom text and master text is usually used. In practice, users often copy items from similar projects. All the possibilities mentioned above can be combined as desired.

When items in your files are associated with unit prices of other construction projects or with prices in master catalogs, Allplan Quantities offers the option to quickly draw up initial cost estimates for the relevant trade right from the outset. If you have already created files for all the trades, you can also calculate the costs for the entire project.

Creating Files Based on Custom Text

If no master text is available yet or if the tender is too specific to use predefined text, you can create a file based on custom text. Once the project is complete, you can copy the text you created from the file into a master directory and thus generate your own master text catalog.

Creating folders

The "Folder - Cost" level, which can be inserted between the project level and the file level in the hierarchy, allows you to refine the hierarchic structure of projects (e.g. taking into account various construction stages or components).

It is not necessary to create a folder line. A structure consisting of trades and files is usually sufficient for small construction projects. In this case, you insert the file lines below the "Project - Cost" hierarchy.

Important!
If you want to tender different companies individual titles (in the case of tenders based on sections), you **must** use the "Folder - Cost" level for files and the "File - Total/End" level for titles. It is **absolutely essential** that you stick to this hierarchic structure. Otherwise, you cannot check quotations as this requires entire files!

The elements that are directly subordinate to the '**Folder**' level in the hierarchy are totalized in the '**Folder**' line and the associated cost line.

When you have created a folder, two new indented lines – the folder and the cost line - are displayed below the project line in the **Type** column.

Enter descriptive text (e.g. "Component 1") in the **Short text** column of the folder line and a sum name for this construction stage (e.g. "Total – component 1") in the **Short text** column of the cost line.

Note: You can configure the program to transfer the contents of the short text line automatically to the first long text line (provided you have enabled the relevant option in the **Settings** tool on the **Extras** menu).

Creating files

Subsequent awarding procedures are based on files. A file is created for each trade in a project. The "File - Total/End" level cannot include any further files. A folder or project, on the other hand, can contain several files. Files are always subordinate to the project or folder line.

Important!
It is **essential** that you create files as tenderers can only be created for files (not possible for folders, titles or items)! Otherwise, you cannot check any quotations!

The costs of the items that are directly subordinate to the '**File**' level in the hierarchy are totalized in the '**File**' line and the associated total/end line.

When you have created a file, two new indented lines – the file and the total/end line - are displayed below the project or folder line in the **Type** column.

Enter text (e.g. "Unfinished structure work") in the **Short text** column of the file line and a sum name for this trade (e.g. "Total – Unfinished structure work") in the **Short text** column of the total/end line.

Create titles

Titles refine a file's structure and are usually used for service types. You can subordinate an unlimited number of titles of the same level in the hierarchy to a file.

The "Title - Total/End" level can include any number of subordinate titles (for example, the "Masonry work" title can consist of the subordinate "Exterior walls", "Interior walls" etc. subtitles).

The elements that are directly subordinate to the relevant title in the hierarchy are totalized in the '**Title**' line and the associated total/end line.

When you have created a title, two new indented lines – the title and the total/end line - are displayed below the file line in the **Type** column.

Enter the service type (e.g. "Earthwork title") in the **Short text** column of the title line and a sum name for this title (e.g. "Total – Earthwork title") in the **Short text** column of the total/end line.

Note: To create subtitles for a title, place the insertion marker in the total/end line of the relevant title and repeat the steps above.

Creating items

Items are data records of the lowest level in the hierarchy. You cannot create any items that are subordinate to items. Consequently, items consist of one line only (an associated sum line does not exist!).

The sections that follow explain how to turn "empty" items into specification descriptions.

Creating comments

Comments can be used to describe files, titles, subtitles and items more precisely. As with items, comments are data records of the lowest level in the hierarchy. You cannot create any comments that are subordinate to comments.

To assign a comment to a title, place the insertion marker in the first item line of the relevant title.

If this title does not contain any items, place the insertion marker in the title's total/end line. To create a comment that precedes one or more items, place the insertion marker in the item line of the first item to which you want to assign this comment.

Note: To add text notes to files, you can also define items as **text items**. This item category is used exclusively for purely "textual" files and must **not** be used **within** GAEB-compliant files (for details see "Assigning Categories and Types of Items in Compliance with GAEB Guidelines").

Creating tenderer text supplements

A tenderer text supplement is additional information on the long text (e.g. item number or finish definition) that the tenderer may be requested to provide in the quotation. Tenderer text supplements can be added to one or more items.

Editing specification descriptions

You have created a file with one or more titles containing one or more empty items to which text, dimensions, quantities etc. need to be assigned. If you want to perform initial cost calculations for the trade right from the outset, you need to enter estimated unit prices.

If you are working with the DIN 276 optional module, it is advisable to define DIN 276 cost groups.

Creating Files Based on Master Data

Besides using custom text, you can also create files based on master data such as user-defined master text, predefined text (e.g. sirAdos text) or existing files.

Creating files based on master data involves the following steps:

- Open the data sheet containing the master data.
- Display or select the prices that are to be copied to the new file and that are to serve as the basis for initial cost calculations.
- Select the desired items in the master data.
- Copy the selected items, including prices, to the new file.

Selecting Estimated Prices in the Master Catalog

Data records saved as master data usually contain several price lines (e.g. items with several estimated prices in a master catalog). When you copy data records (e.g. items from a master catalog to a new file), Allplan Quantities automatically copies a price for each data record.

Prior to copying, you can specify which price is transferred to the new file using one of the following options:

- To use the prices of a single tenderer, display the prices of this tenderer only.
- To use the prices of two or more tenderers, display all the price lines and select the line with the price you want to use for each item. These can be price lines of different tenderers.

Note: You can also copy the prices of one or more tenderers (e.g. the average prices of the MID tenderer) to an existing file later. Detailed information is provided in the "Cost Calculation" section.

Selecting Data Records in Master Catalogs

Allplan Quantities allows you to copy entire folders, files and titles as well as individual items and comments quickly and easily. When creating files based on master data, this is very useful as you can select specification descriptions including prices and hierarchic structures from a master catalog and transfer this data to a new file in a single step. Start by selecting data records in the master catalog.

If you know the item number or code text of the specification descriptions, you can also enter this information directly.

Note: When you select entire levels in the hierarchy in a single step, only the prices of a single tenderer can be used for the individual levels in the hierarchy. To transfer the prices of different tenderers, you need to select the price lines individually.

Copying Data Records from the Master Catalog to a File

The process of copying data records is easy: select the relevant data records, activate the tool you want to execute, place the insertion marker as you need in the new file and insert the data records there. You can also drag and drop the selected data records out of the master catalog into the new file.

When you copy and insert folders, files, titles, items or comments, it is important that you take the hierarchic structure into account:

Project
Folder
File
Title
Comment
Item
Item
Item
Total/End Title
Total/End File
Cost Folder
Cost Project

To copy a title to the end of a file, place the insertion marker in the file's total/end line before you insert the title. When, for example, a copied title is to precede another title, place the insertion marker in the title line which is to be preceded by the new title prior to inserting. When inserting items, place the insertion marker on the item that is to follow the item to be inserted.

Note: When you transfer specification descriptions from an existing file to a new file and copy data records without opening the dialog box for copying data, quantity calculations are automatically copied at the same time. If you do not want to transfer these quantity calculations to the new file, you need to copy the data records without quantity calculations using the dialog box for copying data records. Alternatively, delete the quantity calculations later.

Including quantity calculations in copy operations can be useful when you want to create an alternative or contingency item based on a "normal" item, for example.

Creating Files Based on the StLB

The standard service catalog (= StLB), which is issued by the German Institute of Standardization, is designed for describing any tasks related to construction work - ranging from the building process itself to maintenance and management of buildings and real estate.

In Germany, the StLB is used especially for public tenders.

Text in the standard service catalog consists of five parts. A number of variants is available for each part. These five text parts are structured hierarchically. Users can choose one of the variants presented on each of the five levels in the hierarchy. Each text variant in the standard service catalog includes a specific number.

The advantage of the StLB is that it provides standard specification descriptions, which can be understood by everyone. A disadvantage, however, is that estimated prices cannot be entered.

Note: Before you can create a file based on the StLB in Allplan Quantities, you need to purchase the relevant service types from the Beuth Verlag in Germany and install them.

Installing and deleting StLB service types

The individual service types of the standard service catalog can be purchased on storage media from the Beuth Verlag in Germany.

By installing the StLB, the files on the storage medium are imported to the hard disk and automatically converted to a data format that can be processed by Allplan Quantities.

You can delete service types you no longer require from the hard disk to free up disk space, for example.

Printing StLB service types

You can print the service types you have installed. The printout has the same layout as the original standard service catalog.

Creating a file using the StLB

Specification descriptions based on the StLB are defined using the **Standard Service Catalog** processing template.

Some text parts in the StLB include additional text. Depending on the selected text part, there are three types of additional text:

- Additional text which must be entered by the party issuing the invitation to tender.
- Additional text which can be entered by the party issuing the invitation to tender; the tenderer must enter additional text if the party issuing the invitation to tender has not done this.
- Additional text which must be entered by the tenderer.

Editing specification descriptions based on the StLB

Normally, you cannot edit specification descriptions you have created based on the StLB. In other words, you cannot modify short or long text, for example. However, you can convert individual StLB items to open text items, which are editable. In this case, the StLB code of the relevant item is deleted automatically and the additional text "Based on StLB no. ....." followed by the StLB number is added to the item's long text.

Creating Files Using STLB-Bau or DBD

When you have purchased the "STLB-Bau Dynamische Baudaten" and/or "DBD Dynamische Kostenelemente" CD, you can also use the specification descriptions of these databases for Allplan Quantities. To install this application, follow the instructions given by STLB-Bau. The CD includes the entire range of items provided by STLB-Bau. The data that is actually available to you depends on the license you have purchased. If you can access the demo data only, please contact the CD supplier.

Note: Before you work with ”STLB-Bau Dynamische Baudaten” and/or ”DBD Dynamische Kostenelemente”, check that this application has been installed correctly.

The ”STLB-Bau Dynamische Baudaten” or ”DBD Dynamische Kostenelemente” database can be accessed using the **STLB-Bau Dynamische Baudaten / DBD - Dynamische Kostenelemente** processing template which has been specially developed for this application. This processing template assists you in the process of creating and editing text. The data you set up in this application can be imported quickly and easily to Allplan Quantities.

You can use this processing template to create one or more items in a single step. The item text is transferred straight to the current data sheet and can be changed at any time. All you need to do is open the relevant processing template and modify the transferred item.

Tip: Please consult the "STLB-Bau Dynamische Baudaten" and "DBD Dynamische Kostenelemente" documentation for details.

Text that is still missing information can be completed automatically in this processing template without you having to start ”STLB-Bau” and/or ”DBD”. In addition, this processing template allows you to check that text is complete and valid.

Icon	Use
	You can use this tool to unlock an STLB-Bau item. The item is not a standard item any longer and can be edited freely (only available if the item is STLB-Bau text).
	You can use this tool to create a new item based on STLB-Bau. Click **OK** to exit STLB-Bau. The new item is inserted below the current item.
	You can use this tool to create several new items based on STLB-Bau. Click **OK** in STLB-Bau to transfer text to Allplan Quantities and select the next text you want to use. Click **Cancel** to exit STLB-Bau. The new items are inserted below the current item.
	You can use this tool to modify the current item in STLB-Bau (only available if the item is STLB-Bau text).
	You can use this tool to automatically complete the definition of an STLB-Bau item that is still missing information (only available if an STLB-Bau text is still incomplete).
	You can use this tool to delete the current item.
	You can use this tool to display the key number of a specific text (only available if the item is STLB-Bau text).

The text of an STLB-Bau item is standard text. It cannot be modified. However, when tenders do not necessarily have to be based on StLB, you can customize this text by removing the write protection.

When you have purchased "STLB-Bau mit Baupreisen", the unit prices calculated are transferred to Allplan Quantities.

Creating Files Using HeinzeBauOffice

When you have purchased the BauOffice CD from Heinze, you can use the specification descriptions provided in this database for Allplan Quantities. To install HeinzeBauOffice, follow the instructions given by Heinze. The CD includes the entire range of items provided by Heinze. The data that is actually available to you depends on the license you have purchased. If you can access the demo data only, please contact Heinze.

Note: Before you can import Heinze specification descriptions, you have to install HeinzeBauOffice.

You can activate HeinzeBauOffice straight from Allplan Quantities using the **HeinzeBauOffice** processing template. The data you assemble in this application can be imported quickly and easily to Allplan Quantities. The data, which is transferred via the GAEB interface, is entered in the open data sheet.

Tip: Please consult the HeinzeBauOffice documentation for details.

Besides the buttons provided by all Allplan Quantities processing templates (at the bottom left), the HeinzeBauOffice processing template includes the following additional tools:

Icon	Function	Use
	**Create new item**	You can use this tool to create a new item.
	**Create master item**	You can use this tool to create a master item.
	**Create custom item**	You can use this tool to create a custom item.
	**Revise text of this item**	You can use this tool to modify the text of an item.
	**Research**	You can use this tool to research an item.

Icon	Function	Use
	**Delete item**	You can use this tool to delete the current item.
	**Settings**	You can use this tool to make settings for interfacing with HeinzeBauOffice.

Importing individual items straight from HeinzeBauOffice

Items are always transferred to Allplan Quantities. This applies regardless whether you create master or custom items.

Tip: Master items that have already been transferred to Allplan Quantities can be edited at any time.

The difference is that you cannot specify the contents of long text in HeinzeBauOffice when you use master items.

In the case of custom items, however, you can quickly and easily define the contents of the items yourself by selecting the relevant questions.

You can also combine master and custom items.

Options for HeinzeBauOffice

To harness all the advantages provided by using HeinzeBauOffice in conjunction with Allplan Quantities, the options need to be set correctly. This is done automatically when you install HeinzeBauOffice and then start Allplan Quantities. However, if these settings have been modified, you need to correct them manually.

Creating Files Using sirAdos Building Data

When you have purchased sirAdos®-Baudaten, you can also use the sirAdos item and element catalogs for tendering in Allplan Quantities. To do this, install sirAdos-Baudaten as described in the sirAdos/WEKA MEDIA installation instructions.

The data that is actually available to you depends on the license you have purchased. If you can access the demo data only, please contact sirAdos.

Creating Master Text for Allplan Quantities Based On sirAdos Building Data

As opposed to previous versions of sirAdos Building Data (e.g. sirAdos-select), the latest the sirAdos Building Data CD does not contain any prepared MDI files with the complete trades. This way you can choose which trades and items you want to transfer and generate your own MDI files in sirAdos Building Data for data transfer to Allplan Quantities.

You can import the generated MDI files into Allplan Quantities through the MDI interface and then create your own masters, element masters, files or element schedules based on this data.

Note: As complex projects increase the computing time, it is advisable to define a maximum of 15 trades per master catalog. You should therefore spread master text among several master catalogs.

Importing Individual Items from the sirAdos Building Data CD into Allplan Quantities

If you do not want to manage your own item masters with sirAdos text, you can use the sirAdos Building Data CD as a master. The advantage is that you need much less hard disk space and that you can immediately use the text provided on the CD without having to install it first (in the case of updates, for example).

You can import one or more sirAdos items from one or more titles either into the buffer database or directly into your current file in Allplan Quantities. The contents of the buffer database can be inserted anywhere into any project at any time (if the data types match).

The data can be pasted into a file at the position of the insertion marker or it can be sorted by code text number. In the latter case, the **Calculation** data sheet must be open.

Two options are provided for importing data to files and to the buffer database:

- sirAdos text is pasted at the position of the insertion marker (default) - requirement: the **Sort after insertion** option in the **Settings** dialog box must be deactivated. All the levels in the hierarchy (titles) are removed from the buffer. Irrespective of the sequence and trade from which it originates, text is always pasted at the current position of the insertion marker in the data sheet.
- sirAdos text is sorted and inserted in a file - requirement: the **Sort after insertion** option in the **Settings** dialog box must be activated. With this method, it is important that you maintain the **Codetext** column as the items in a file are sorted by this **column. Consequently, this method cannot be used with elements and masters without file lines.**

  However, it is particularly useful when you create files using sirAdos text only. When the data is pasted in the data sheet, all the lines in the buffer are taken into account. Note, however, that only the lines whose code text numbers do not yet exist in the file are inserted. The lines to be inserted are sorted by code text number and added to the file accordingly.

Important!
Before you can import individual sirAdos items directly into Allplan Quantities, you have to install the sirAdos Building Data CD and correctly configure the online interface between sirAdos and Allplan Quantities.

Creating Files Using a Bar-Code Reader

You can use bar-code readers to quickly and easily create files based on sirAdos master text, for example. All you need to do is scan the bar-code label of an item using a bar-code reader and copy the selected specification descriptions to a project in a single step. That's all!

Note: Bar-code readers do not come with Allplan Quantities. As they must be consistent with the bar-code labels used in specification descriptions, bar-code readers are usually distributed by the providers of tender text.

Preparations for using bar-code readers

Connect the bar-code reader or another suitable input device to your computer as described in the documentation provided by the manufacturer of the device.

In addition, you need to install all the specification descriptions you want to select with the bar-code reader as a master catalog in Allplan Quantities.

Creating a file using the bar-code reader

You can only create a file in this manner when all the specification descriptions you want to select using the bar-code reader are available as a master catalog in Allplan Quantities. In addition, the specification descriptions including suitable bar-code labels must be available on paper. These requirements are met by sirAdos text, for example.

Adding Specification Descriptions Using the BRUNS Plant Catalog

General information

You need to purchase a license in order to use plant catalogs in conjunction with Allplan Quantities. Otherwise, the functions for editing plant catalogs are not available to you.

The Allplan DVD includes the specification descriptions of the BRUNS Plant Catalog 2004/2005. This project, which has already been converted to Allplan Quantities format, is located in the directory `<dvd>\programs\Allplan BCM\Demodaten_Baukosten\Stämme` on the CD and can be loaded using Allplan Quantities' archive administration.

Note: Updated versions of the BRUNS Plant Catalog (if any) can be obtained directly from BRUNS. How to import this data in Allplan Quantities is described below in the "Importing the BRUNS Plant Catalog from floppy disk" section.

Plant Disposition processing template

Allplan Quantities provides a special processing template for creating text using the BRUNS Plant Catalog: the **Plant Disposition** processing template.

You can use this template to select plants and generate estimated prices for cost estimates. The master project called "BRUNS Plant Catalog" serves as the basis.

Icon	Function	Use
	**Create new item**	You can use this tool to create a new item based on a specification description from the plant catalog.
	**Edit item**	You can use this tool to modify an item based on a specification description from the plant catalog.
	**Delete item**	You can use this tool to delete an item based on a specification description from the plant catalog.

Important!
Activate the **Apply price** check box to automatically transfer the unit price from the price list according to the quantity entered.

Using the price list of the BRUNS Plant Catalog

The BRUNS Plant Catalog contains a price list with prices for all the plants including quantity discounts (the discounts allowed vary depending on the selected plant).

Allplan Quantities automatically recalculates the prices in the processing template when you change the **quantity**. When you have activated the **Apply price** check box, the unit price is copied from the price list, taking quantity discounts into account. When the **Apply price** check box is deactivated, you enter the price directly.

As quantity data can also be entered using quantity takeoff operations or via the CAD interface, for example, you can update the prices and quantity discounts in the processing template for all the plants selected from the BRUNS Plant Catalog.

Data exchange between Allplan and Allplan Quantities

In order for the data exchange between Allplan and Allplan Quantities to run smoothly, the two programs must use the same master data. The master data provided by Allplan Quantities is managed as a material catalog in Allplan. The essential data field is the **Code text** column.

If Allplan and Allplan Quantities are installed on the same computer or if the Allplan data directory is shared on the network, you can enter the destination path directly.

Note: More detailed information on exchanging data between Allplan and Allplan Quantities is provided in the chapter entitled "Quantity Takeoff Operations using Graphics".

Importing the BRUNS Plant Catalog from floppy disk

Updated versions of the BRUNS Plant Catalog (if any) can be obtained directly from BRUNS. Before you can create tenders in Allplan Quantities using these up-to-date specification descriptions, which you are given on a floppy disk, this data needs to be imported into Allplan Quantities as a master project.

The BRUNS Plant Catalog is provided as a self-extracting EXE file. Copy the BRUNS catalog file to a temporary directory on your hard disk or network and unpack it by executing the file. Once the plant catalog has been imported in Allplan Quantities, you can delete the temporary directory, including the BRUNS catalog file.

Note: The catalog file requires approx. 30 MB, the Allplan Quantities master project that is created requires 60 MB of free hard disk space. Before you start unpacking or importing the catalog file, make sure that you have enough free hard disk space.

Adding Specification Descriptions Using GreenBASE Plant Disposition

General information

You need to purchase a license in order to use plant catalogs in conjunction with Allplan Quantities. Otherwise, the functions for editing plant catalogs are not available to you.

When you have purchased the GreenBASE Plant Disposition CD from GreenX, you can also use these plant lists for Allplan Quantities. To install GreenBASE Plant Disposition, follow the instructions given by GreenX. The data that is actually available to you depends on the license you have purchased. If you can access the demo data only, please contact GreenX.

There are two ways to use the GreenBASE Plant Disposition application:

- You can create a catalog containing the plants you selected (including quality and price details). You can then use this catalog as a master catalog for creating tenders in Allplan Quantities or you can export it as a material catalog to Allplan.
- While creating files in Allplan Quantities, you can directly access the GreenBASE Plant Disposition application, select plants in its extensive database and paste these plants into a file (see the section entitled ”Transferring GreenBASE plants directly to projects”).

Plant Disposition processing template

Allplan Quantities provides a special processing template for creating text using GreenBASE Plant Disposition: the **Plant Disposition** processing template.

You can use this template to select plants and generate estimated prices for cost estimates. The master project called ”GreenBASE Plant List” serves as the basis.

Icon	Function	Use
	**Create new item**	You can use this tool to create a new item based on a specification description from the plant catalog.
	**Edit item**	You can use this tool to modify an item based on a specification description from the plant catalog.
	**Delete item**	You can use this tool to delete an item based on a specification description from the plant catalog.

Important!
Activate the **Apply price** check box to transfer the unit price from the price list automatically, according to the quantity entered.

Using the price list of GreenBASE Plant Disposition

The GreenBASE plant catalog contains a price list with prices for all the plants including quantity discounts (the discounts allowed vary depending on the selected plant).

Allplan Quantities automatically recalculates the prices in the processing template when you change the **quantity**. When you have activated the **Apply price** check box, the unit price is copied from the price list, taking quantity discounts into account. When the **Apply price** check box is deactivated, you enter the price directly.

As quantity data can also be entered using quantity takeoff operations or via the CAD interface, for example, you can update the prices and quantity discounts in the processing template for all the plants selected from the plant catalog.

Data exchange between Allplan and Allplan Quantities

In order for the data exchange between Allplan and Allplan Quantities to run smoothly, the two programs must use the same master data. The master data provided by Allplan Quantities is managed as a material catalog in Allplan. The essential data field is the **Code text** column.

If Allplan and Allplan Quantities are installed on the same computer or if the Allplan data directory is shared on the network, you can enter the destination path directly.

Note: For more detailed information on exchanging data between Allplan and Allplan Quantities, please consult the manual entitled "Quantity Takeoff Operations using Graphics".

Transferring GreenBASE plants directly to projects

When you do not manage your own plant master with all the GreenBASE plants, you can use GreenBASE Plant Disposition as a master catalog. For this, you can import individual plants from GreenBASE directly into the current projects.

The advantage of this is that you require not so much hard disk space and that you can immediately use the text provided on the CD without having to install it first (in the case of updates, for example).

You can copy one or more plants straight to the current file. The selected plants are inserted where the insertion marker is located in the file.

If the plant items created in the file have been generated including BRUNS price details, you can assign the relevant quantity-based unit prices to the items by using the **Plant Disposition** processing template. For details, see the section entitled "Update the Price List According to the GreenBASE Plant Catalog".

Note: Before you can import GreenBASE plants, you have to install the GreenBASE CD.

Create Files Based on CAD Data

When you have created a three-dimensional building in Allplan and used the specification descriptions prepared by Allplan Quantities to define the materials of the components, you can create a special Allplan Quantities schedule including the item quantities calculated during quantity takeoff operations.

This quantities schedule is transferred to Allplan Quantities and, based on the code text, the quantities specified in this schedule are associated with the specification descriptions of Allplan Quantities.

As you go along, the files/element schedules created in this manner can be evaluated and edited according to various criteria.

Note: A detailed description is provided in the section entitled "Importing Quantity Takeoff Schedules into Allplan Quantities (see "Importing Allplan Quantity Takeoff Schedules into Allplan Quantities" on page 77)".

Create Files Based on Element or Room Schedules

When element and/or component calculations are performed, several items of different trades are used to calculate elements that represent entire components. A possible element, for example, would be an interior wall consisting of masonry, plaster, wallpaper, paint and baseboard.

Using these elements, Allplan Quantities creates a project-specific element schedule, which can then serve as a basis for automatic generation of trade-specific files. In other words, when an element schedule is used to create a file, the items of different trades of an element are written to the relevant trades in accordance with the structure of the master data.

Note: A brief description of generating files based on element schedules is provided in the section entitled "Creating a CAD Item Catalog (Master File) Based on an Element Catalog".

Defining Item Categories and Item Types

Files often contain not only normal items, which are added up, but also other item categories and types: alternative items, for example, replace normal items. If needed, contingency items may be added in case special services are required. A basic item is a normal item with one or more alternatives. In printouts, text items are larger than other items as they do not contain any prices or quantities. You can also use the '**Text**' item category to give preliminary notes a hierarchical structure, for example.

The calculation results of files vary depending on the item categories used. For example, normal, requirement and basic items are taken into account when the total price is calculated. Contingency and alternative items, on the other hand, are excluded. You can combine these categories with item types. By defining reference items and repetitive items, you can create cross-references between items.

As categories and types of items can be reset and redefined at any time, you can quickly and easily calculate a number of variants when drawing up initial cost estimates or checking quotations.

The categories and types of items are defined in the **Properties of (name of item)** dialog box.

Note: When you want to exchange GAEB-format files with design partners, you have to take into account the special conditions for defining categories and types of items. For detailed information, please see "Exchanging Data via the GAEB Interface".

You can enter the item categories most commonly used in practice directly in the **Type** column:

- Alternative item
- Requirement item
- Contingency item
- Basic item
- Normal item
- Text item

If these item categories do not meet your requirements, you can also use the **Properties of (name of item)** dialog box to define items.

Points to bear in mind when defining categories and types of items:

- **Basic item** associated with **alternative item** – a basic item *must* be defined for *each* alternative item! One or more alternative items *must* be assigned to *each* basic item. These assignments are made using assignment numbers.
- **Reference item** associated with **repetitive item** – a repetitive item requires a reference item whose item number has to be entered as the reference.

- **Implementation description** associated with **repetitive item** – an item relating to an implementation description requires an implementation description whose number has to be entered as the reference.
- **Main description and sub-description** – main descriptions always require sub-descriptions and vice versa. When files are set up, sub-descriptions have to be assigned consecutive, two-digit values in ascending order starting with 01.
- Special notes on **DA82** – items without total prices cannot be exported. Basic items are treated as normal items. Open tenderer quantities have to be specified.
- Requirement and contingency items are mutually exclusive in files.
- **Comments** – text supplements to be entered by tenderers cannot be added to comments.
- **Quantity and dimension** – quantities and dimensions have to be specified for items.

Setting up Files

Files can basically be organized and structured to suit your own needs and requirements. Allplan Quantities provides an easy-to-use algorithm that sets up files and automatically assigns item numbers according to your settings. How this is done is described in the section entitled ”Setting up Standard Files”.

When you want to exchange GAEB-format files with design partners, however, the files have to be set up in compliance with the GAEB guidelines. The requirements that must be met as well as the options offered by Allplan Quantities are described in the section entitled ”Setting up Files in Compliance with GAEB Guidelines (on page 107)”.

Setting up Standard Files

You can set up files manually by entering item numbers in the **Item no.** column of the data sheet. But it is much easier to use Allplan Quantities' automatic algorithm.

In automatic mode you can choose to set up files

- by applying a logical structure,
- by using consecutive numbers or
- in compliance with GAEB guidelines.

In addition, you can specify whether file, title and/or item lines are to be set up, define the values at which the operation is to start and decide which fillers and separators are to be used.

The data line in which the insertion marker is currently placed and all the associated, subordinate data records in the hierarchy can be set up in a single step. When, for example, the insertion marker is in a file line, this line and all the subordinate titles, items and/or comments can be set up. To set up an entire project including all the subordinate files, you need to place the insertion marker in the project line.

Note: When you want to exchange GAEB-format files with design partners, you have to take into account the special conditions for assigning item numbers. Detailed information is provided in the "Exchanging Data via the GAEB Interface" chapter. See the section entitled "Setting up Files in Compliance with GAEB Guidelines (on page 107)".

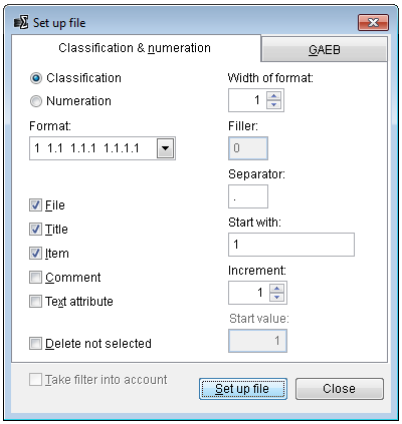
You can set up files as often as you want; the results are always displayed immediately. This way, you can quickly and easily test a wide range of options of structuring files by combining the different criteria and thus find the setting best suited for your purpose.

The examples that follow illustrate some basic options for structuring your files.

Example 1:

In the first example, the default setting was used. The insertion marker was placed in the project line before setting up the file:

Using these settings ...



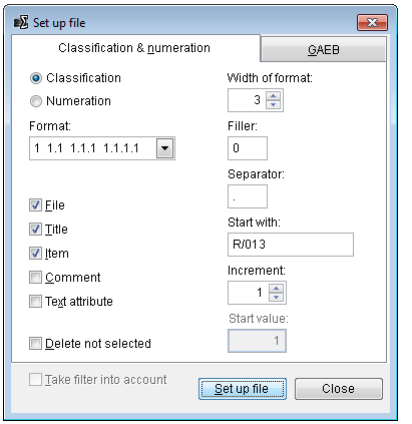
... the result might look like this:

Structure	Item no	Codetext	Short text	Quantity	Dim	UP	TP checked
Project			D2CI			0,00	38.923,53
File	1		List			0,00	38.923,53
Title	1.1	1A	CHAPTER 1A			0,00	0,00
Item	1.1.1	1A_200	top soil degradation		m2	1,00	0,00
Item	1.1.2	1A_300	excavation		m3	7,00	0,00
Item	1.1.3	1A_302	disposal of excavation		m3	6,00	0,00
Item	1.1.4	1A_805	backfilling of the pit		m3	6,00	0,00
Total/end		1A				0,00	0,00
Title	1.2	2A	CHAPTER 2A			0,00	582,66
Title	1.3	2C	CHAPTER 2C			0,00	0,00
Item	1.3.1	2C_106	half-round gutter		m	14,00	0,00
Item	1.3.2	2C_107	channel invert		No	5,00	0,00
Item	1.3.3	2C_109	gutter beam		No	5,00	0,00
Item	1.3.4	2C_203	roofing		m2	15,00	0,00
Item	1.3.5	2C_206	ridge frame		m	4,00	0,00

Example 2:

In the next example, the width of format was set to three characters and ”0” was selected for the filler; the text ”R / 013.” is to be applied to the title ”Concrete and R.C. works”. The insertion marker was placed in this title line before setting up the file:

Using these settings ...



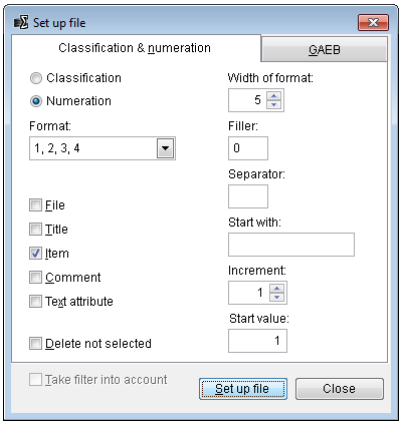
... the result might look like this:

Structure	Item no	Codetext	Short text	Quantity	Dim	UP	TP checked
Project			D2CI			0,00	38.923,53
File	R/		List			0,00	38.923,53
Title	R/012.001	1A	CHAPTER 1A			0,00	0,00
Title	R/013.002	2A	CHAPTER 2A			0,00	582,66
Title	R/013.003	2C	CHAPTER 2C			0,00	0,00
Item	R/013.003.001	2C_106	half-round gutter		m	14,00	0,00
Item	R/013.003.002	2C_107	channel invert		No	5,00	0,00
Item	R/013.003.003	2C_109	gutter beam		No	5,00	0,00
Item	R/013.003.004	2C_203	roofing		m2	15,00	0,00
Item	R/013.003.005	2C_206	ridge frame		m	4,00	0,00
Item	R/013.003.006	2C_208	fence to catch the snow		m	10,00	0,00
Item	R/013.003.007	2C_310	vally flashing with out web, 4 splays		m	18,00	0,00
Item	R/013.003.008	2C_600	delivery of lumber		m3	248,00	0,00
Item	R/013.003.009	2C_601	delivery of planed lumber		m3	266,00	0,00
Item	R/013.003.010	2C_602	chemical wood preservation		m3	26,00	0,00
Item	R/013.003.011	2C_604	cross battens softwood		m2	2,00	0,00
Item	R/013.003.012	2C_605	joining and mounting of lumber		m	5,00	0,00
Item	R/013.003.013	2C_607	ridge fish joint		m	3,00	0,00
Item	R/013.003.014	2C_609	verge board		m	5,00	0,00
Item	R/013.003.015	2C_633	battens softwood		m2	4,00	0,00
Item	R/013.003.016	2C_815	wood coating for outside with gloss paint		m2	9,00	0,00
Item	R/013.003.017	2C_903	vapor-diffusion foil		m2	6,00	0,00
Total/end		2C				0,00	0,00
Title	R/013.004	2D	CHAPTER 2D			0,00	0,00
Item	R/013.004.001	2D_001	balcony balustrade		m	128,00	0,00
Item	R/013.004.002	2D_004	coating		m	13,00	0,00

Example 3:

In this example, a standard numeration was entered that is to apply to items only; the width of format was set to five characters and ”0” was selected for the filler so that up to 99,999 items can be numbered using a consistent logical system; no separator was specified. The insertion marker was placed in the file line before setting up the file:

Using these settings ...



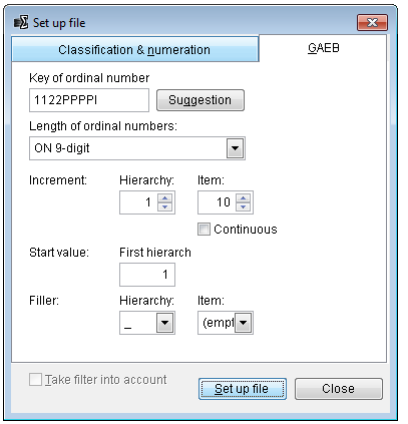
... the result might look like this:

Structure	Item no	Codetext	Short text	Quantity	Dim	UP	TP checked
Project			D2CI			0,00	38.923,53
File			List			0,00	38.923,53
Title		1A	CHAPTER 1A			0,00	0,00
Item	00001.	1A_200	top soil degradation		m2	1,00	0,00
Item	00002.	1A_300	excavation		m3	7,00	0,00
Item	00003.	1A_302	disposal of excavation		m3	6,00	0,00
Item	00004.	1A_805	backfilling of the pit		m3	6,00	0,00
Total/end		1A				0,00	0,00
Title		2A	CHAPTER 2A			0,00	582,66
Title		2C	CHAPTER 2C			0,00	0,00
Item	00053.	2C_106	half-round gutter		m	14,00	0,00
Item	00054.	2C_107	channel invert		No	5,00	0,00
Item	00055.	2C_109	gutter beam		No	5,00	0,00
Item	00056.	2C_203	roofing		m2	15,00	0,00
Item	00057.	2C_206	ridge frame		m	4,00	0,00
Item	00058.	2C_208	fence to catch the snow		m	10,00	0,00
Item	00059.	2C_310	vally flashing with out web, 4 splays		m	18,00	0,00
Item	00060.	2C_600	delivery of lumber		m3	248,00	0,00

Example 4:

In the fourth example, the file was set up using the GAEB numeration suggested by Allplan Quantities. To set up a file in this manner, you have to place the insertion marker in the file line (required by GAEB guidelines). You can then click the **Suggestion** button to use Allplan Quantities' suggestions:

Using these settings ...



... the result might look like this:

Structure	Item no	Codetext	Short text	Quantity	Dim	UP	TP checked
Project			D2CI			0,00	29.574,50
File			List			0,00	29.574,50
Title	01		Structure 1			0,00	582,66
Title	01.01	1A	CHAPTER 1A			0,00	0,00
Item	01.01. 10	1A_200	top soil degradation		m2	1,00	0,00
Item	01.01. 20	1A_300	excavation		m3	7,00	0,00
Item	01.01. 30	1A_302	disposal of excavation		m3	6,00	0,00
Item	01.01. 40	1A_805	backfilling of the pit		m3	6,00	0,00
Total/er		1A				0,00	0,00
Title	01.02	2A	CHAPTER 2A			0,00	582,66
Title	01.03	2C	CHAPTER 2C			0,00	0,00
Item	01.03. 10	2C_106	half-round gutter		m	14,00	0,00
Item	01.03. 20	2C_107	channel invert		No	5,00	0,00
Item	01.03. 30	2C_109	gutter beam		No	5,00	0,00
Item	01.03. 40	2C_203	roofing		m2	15,00	0,00
Item	01.03. 50	2C_206	ridge frame		m	4,00	0,00
Item	01.03. 60	2C_208	fence to catch the snow		m	10,00	0,00
Item	01.03. 70	2C_310	vally flashing with out web, 4 splays		m	18,00	0,00
Item	01.03. 80	2C_600	delivery of lumber		m3	248,00	0,00
Item	01.03. 90	2C_601	delivery of planed lumber		m3	266,00	0,00

Setting up Files in Compliance with GAEB Guidelines

Files you want to exchange via the GAEB interface have to be set up in compliance with GAEB guidelines. The "Set up files in GAEB format" feature lets you set up files quickly and easily.

Allplan Quantities automatically creates a key for ordinal numbering (= ON key), which you can accept or modify (even at a later stage). Based on the format of this ON key, Allplan Quantities then sets up the entire file in ascending order.

The ON key, which consists of a maximum of nine digits, defines the format of the item numbers to be assigned. The characters of the ON key represent the number of digits for the individual levels in the hierarchy, the items and the item index.

For example, the "1122PPPPI" ON key creates the following item number: "01.22. 12a". "01" is the number of the first title in the hierarchy, "22" is the number of the second title, " 12" is the item number and "a" the item index.

Note: The item index is not used in Allplan Quantities.

The result might look like this:

P*	Typ	Pos.-Nr	Kurztext	La	DI
	Projekt		GAEB D81	M	
	Verzeichnis		Information Leistungsverzeichnis.1 Satz*	M	
	Bemerkung		Hinweis	M	
	Bemerkung		Hinweis	M	
	Titel		Einleitung	M	
	Titel		Bezeichnung der LV-Gruppe S2 1	M	
	Bemerkung		Hinweis	M	
	Pos.		Einr.Raeum.Vorh.	M	
	Summe/Ende		Summe Bezeichnung der LV-Gruppe S2 1	m	
	Bemerkung		Hinweis	M	
	Titel		Bodenbelagsarbeiten	M	
	Pos.		Belag aufnehmen PVC	M	
	Pos.		Belag aufnehmen PVC	M	
	Pos.		PVC homogen	M	
	Pos.		PVC homogen	M	
	Summe/Ende		Summe Bodenbelagsarbeiten	m	
	Summe/Ende		Summe Einleitung	m	
	Summe/Ende		SUMME Information Leistungsverzeichnis.1 Satz	m	
	Kosten		Kosten	M	

Important!
Comments and the ‘Sub-description’ and ‘Execution description’ item categories are not set up automatically. You can use the ”Change item category” tool to assign consecutive numbers to these item categories when defining them.

Add Images and Sketches

Allplan Quantities allows you to integrate objects in order to touch up your files. This way, you can enhance simple text by adding graphics or even acoustic elements – making things a lot clearer! These objects can be images or, depending on your hardware, audio elements or videos. In practice, however, images are most commonly used.

The ”Basic Introduction” chapter provides detailed information on ”Object Fields and Object Windows” and describes the process of ”Inserting Objects in Object Windows”.

When you copy specification descriptions from master text where sketches have already been inserted, these sketches are automatically included in the copy operations.

When you select an appropriate report, the objects integrated in a file are included in printouts.

Determining File Quantities for Tenders

Your file contains the specification descriptions, the definition of the item categories and the item numbers. All that is still missing in the tender is the file quantities.

There are basically two ways to enter quantities in files. You can

- specify quantities by direct entry in the **Quantity** column (individual quantities cannot be determined; quantities cannot be split) or
- calculate quantities using quantity calculations (individual quantities are easy to determine; quantities can be split).

Which method is to be preferred depends on various aspects: entering quantities directly is easier, but usually only suitable for small construction projects and only if the quantities do not have to be split up.

Tip: When choosing the method, spend some time thinking ahead: how do you want to determine the quantities in subsequent phases of the project? One advantage of quantity calculations is that they can be used throughout the project, from setting up the file all the way through to invoicing.

The initially more complex method of using individual quantity calculations is preferable when you transfer the item quantities from several different components or when you want to split quantities, i.e. if the quantities used are to be allocated to various construction projects or clients. To assist you in defining and using quantity calculations, Allplan Quantities offers a processing template as well as the possibility to enter custom calculations, REB formulas and variables.

Note: More detailed information on calculating quantities is provided in the "Conventional Quantity Takeoff Operations" chapter.

Calculate the Total Costs of Files or Projects

You have created and set up the file, and calculated the file quantities. When all items of the file have been assigned estimated prices, you can already perform initial calculations to determine the estimated total costs of the file or entire project. This is the case, for example, when you have created the file based on master text or a master file and transferred the specification descriptions together with the associated prices.

Note: If no prices have been assigned, you need to enter them before you can calculate the costs. How this is done is described in the chapter entitled "Calculating Costs", in the "Cost Calculation" section.

Printing Files

You have created the file and calculated the file quantities. All you need to do now before dispatching the file is print it.

Note: More detailed information on printing and alternative output options (e.g. output to MS Word or output in RTF, HTML or PDF format) is provided in the section entitled "Printing Files, Cost and Quantity Calculations".

Important!
To add a cover sheet to a file, you need both the project data (e.g. name of client, project name etc.) and the file data. Please make sure that this data is complete. Where this data needs to be entered is described in detail in the "Data for the File Cover Sheet" section.

Back up Files

Printing and dispatching a file marks the end of the first stage in editing files. At this point in time, at the latest, you should create a backup of the project. not only to be able to restore it in case of data loss, but also to document the file contents at the different phases of the construction project. Allplan Quantities' Archive Administration tool therefore offers quick and easy backup options.

More detailed information is provided in the "Backing Up Data and Archiving Projects" chapter. See the section entitled "Backing up and Archiving Projects Using the Archive Administration Tool".

Cost Calculation

You have created a file and transferred the quantities from Allplan or calculated and entered them manually. You can now calculate the preliminary total costs of the file or entire project, provided that the estimated prices have been entered in the relevant price columns.

If you have created the file based on master data (such as user-defined master catalogs/files or predefined text provided by e.g. sirAdos or STLB-Bau), you generally use the prices specified in the specification descriptions provided by the master data; in this case, the price columns already include estimated prices.

If, on the other hand, you have created the file based on custom text, StLB or other specification descriptions that do not contain any estimated prices, you need to enter these prices manually.

Note: For calculating costs, it is a good idea to set up the data sheet as follows: Hide all the columns that are not relevant to the calculations. Alternatively, you can divide the data sheet into two viewports. The descriptive "text block" (**Type**, **Item no.**, **Short text**, **Long text** columns) is then displayed in the window on the left. The "price block" (**MP**, **WP**, **UP**, **TP checked** columns and, if applicable, the **% +/-**, **TP eff.**, **% VAT**, **TP grs** columns) is shown on the right.

Entering or Changing Prices

You can enter prices manually or change the estimated prices copied from a master file, master catalog or from other projects later. Either way, you can enter just a unit price or break down the unit price into up to 6 wage and/or material price portions (= unit price allocation).

When using the unit price allocation, the values in **UP1** to **UP6** and **UP** are interrelated in the following ways:

- If you enter values in the **UP1** to **UP6** columns/input fields, the unit price **UP** is automatically calculated by adding up the values currently entered in **UP1** to **UP6**:

  UP1 + UP2 + ... + UP6 = UP

- If you enter a value in **UP**, the unit prices are allocated based on the following rules:
  If **UP1** to **UP6** contain values and you change the value in **UP**, this value is divided between **UP1** to **UP6** in proportion to the original values.
  If **UP1** to **UP6** are empty or set to "0.00", and if the **Automatically calculate material and wage prices** option is *activated* in the **Settings** dialog box, the value entered in **UP** is divided equally between **UP1** and **UP2**. If this option is *deactivated*, the **UP1** to **UP6** columns/input fields remain empty.

Important!

- Unit prices can only be allocated if you have added the **UP_portions** tab (for data sheets *with* tabs) or the **UP1** to **UP6** columns (for data sheets *without* tabs) to the scheme you are using.
- If you want to use the individual price portions not only for your own internal cost calculations in the **Calculation** phase, but also output them (e.g. in a file printout or to a GAEB file), you need to activate the "Unit price allocation" option for the items concerned. Only then will you be able to enter individual price portions for these items also later in subsequent phases (**Quotation check**, **Awarding**, etc.).
- In addition, if you want the tenderers to quote the price portions in a tender based on GAEB guidelines, the "Unit price allocation is requested" option has to be activated for the entire file.

Assigning Additional Fees/Deductions

You have copied prices from the master data to a new file. When performing cost calculations, you can now also assign additional fees or deductions as a percentage to the unit prices or total prices. The same applies for prices entered manually.

Additional fees and/or deductions can be assigned not only to entire files but also to individual titles or items. In addition to individual prices, you can also update and thus change entire price columns.

If you assign additional fees and/or deductions to individual items, Allplan Quantities immediately calculates the effective total prices of these items. The following applies:

TP ± % +/- = TP eff.

Total price ± additional fee/deduction = effective total price

When you assign additional fees and/or deductions to entire levels in the hierarchy, Allplan Quantities initially enters the additional fees and/or deductions in the **% +/-** columns of all the subordinate data records. The effective total prices are only calculated when you trigger a new calculation of the entire file.

Calculating Total Costs

Before you can determine the estimated total costs of files or projects, you have to enter all the quantities and prices. Otherwise, the sums of the items and consequently the total sums cannot be calculated.

When you (re-)calculate the total costs of a project, all the quantity lines are (re-)calculated and the results are entered in the **Quantity** columns of the relevant items. Next, these results are multiplied by the unit prices to get the total prices of the items. These total prices are finally summed up for every column. This is always done on the next superordinate level in the hierarchy.

When the (re-)calculation is complete, the results are entered in the **Quantity**, **TP checked**, **TP eff.**, and **TP grs** columns in the item lines, total/end lines of the files and in the project's cost line.

Instead of calculating the entire project from scratch each time you change the quantities or unit prices, you can configure the program to automatically calculate the items' sums. This can be specified in the user-definable settings.

Important!
When the **Calculate the quantities immediately after entry** option is enabled, only the sums of the item in question are calculated immediately. The total sums of the superordinate levels in the hierarchy – i.e. the titles, files and project costs – are only updated when you trigger a new calculation of the entire project.

DIN 276-Compliant Cost Calculation

You can use the ”DIN 276 – Cost group analysis” option to analyze and evaluate the costs of a construction project in compliance with the DIN 276 cost groups.

ATTENTION!
The ”DIN 276 – Cost group analysis” option is an optional module. It does not come with Allplan Quantities. You need to purchase a license in order to use this module; otherwise, its functions are not available to you.

Based on drafts that are to scale and qualitative building descriptions, cost calculations in compliance with DIN 276 are performed at the stage of designing. The level of detail you choose depends on the available cost data, amongst others. If detailed data is provided, you can even calculate the costs of individual tasks. The calculation of costs in compliance with DIN 276 is based on a project’s files, including estimated prices and quantities.

Items in files are sorted by trade (i.e. item number). When costs are calculated in compliance with DIN 276, Allplan Quantities basically only rearranges all the items in a project so that they are sorted by the entry in the **DIN 276** column. All the hierarchies like file lines, title lines etc. are ignored.

Allplan Quantities comes with a predefined project including the (new) DIN 276 cost classification, which is easy to install using the Archive Administration tool provided by Allplan Quantities. The tool copies the DIN 276 structure to the project directory.

Allplan Quantities offers a special report – ”Analyzing cost groups in compliance with DIN 276” – for printing DIN 276-compliant cost calculations.

Calculating costs in compliance with DIN 276 involves only a few steps:

- Install the DIN 276 cost classification,
- open the **Calculation** data sheet, and
- print the DIN 276-compliant cost calculation.

To make sure that everything runs smoothly, please keep the following in mind when creating the file:

- The level of detail increases the more files are available in a project.
- The items in the files must include the DIN 276 cost group numbers in the **DIN 276** column.

  The cost group number of an item can consist of a maximum of nine digits plus one character (e.g. an underscore or the value ”0”) which is defined as an additional sorting criterion and which has to appear after the last digit. For example, the cost group numbers of items which are to be subordinate to cost group 331 can be ”331_” or ”3310”.
- Estimated prices must be entered in the **UP** column and quantities in the **Quantity** column.

Exchanging Data via the GAEB Interface

Different software systems impose ever-increasing demands on data exchange. As a result, there has been a call for a standardized format, which simplifies the process of exchanging data used for tendering (contractual agreements, text, quantities, prices).

In November 1985, the first version of a standardized exchange format was introduced by the German committee for electronics in the construction industry (= **GAEB**). This standard was revised in June 1990 and in January 1997. Today the GAEB XML-format is commonly used.

Allplan Quantities' GAEB interface is based on the standard specified by the German committee for electronics in the construction industry. This standard controls the exchange of data between tendering and costing applications of different providers.

This chapter provides detailed information on all the questions pertaining to the GAEB interface. In addition, you will learn about everything related to the exchange of data in GAEB format. In particular, this chapter shows how to

- create files in compliance with the GAEB guidelines,
- assign item categories in a GAEB-compliant manner,
- set up files in compliance with the GAEB guidelines (see "Setting up Files in Compliance with GAEB Guidelines" on page 107),
- add comments and technical contract conditions,
- enter additional information on files (on page 126),
- export data via the GAEB interface and
- import data via the GAEB interface.

Special Feature Relevant to Exchanging Data via GAEB 90

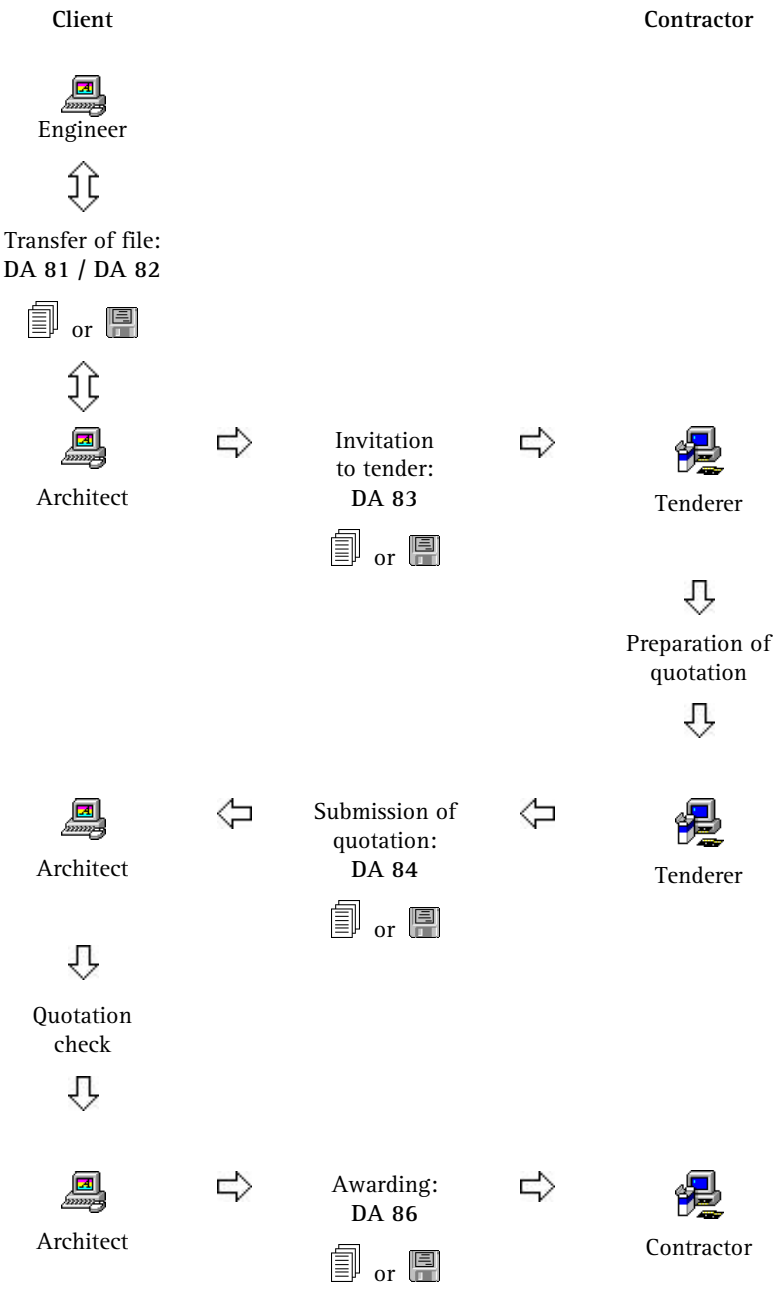
Files in GAEB 90 format are pure text files in ASCII format. Consequently, it can happen that Windows formatting applied to text (tabs, for example) is lost.

Data Exchange Phases in Compliance with GAEB

In compliance with GAEB the process of exchanging data consists of six phases (also referred to as ”data types”), which are defined as follows:

Data type	Phase
DA 81	**Transfer of file**: exchange of specification descriptions without prices
DA 82	**Transfer of estimated costs**: exchange between client – architect – engineer during the design process
DA 83	**Invitation to tender**: transfer of file to tenderer
DA 84	**Submission of quotation**: transfer of quotation (including prices, quantities etc.) from tenderer to architect
DA 85	**Additional quotation**: transfer of alternative data in addition to the main quotation
DA 86	**Awarding**: transfer of file including the checked tender data to the tenderer who is awarded the contract (contractor)

The following illustrates the relationship between the phases:



Creating Files in Compliance with GAEB Guidelines

Allplan Quantities allows you to customize the structure of your projects to suit your own needs and requirements. But there are other applications used for tendering, ordering and billing that cannot process these structures.

If you want to transfer data to other applications via the GAEB interface, it is worth spending some time planning a project's structure before even making the first entry to ensure that the destination program can interpret the selected structure.

Special attention should be paid to the following issues:

- Files must be structured in compliance with GAEB.
- Some applications used for tendering, ordering and billing can process two hierarchical levels maximum.
- All the items must be on the same level in the hierarchy.
- Files must be set up in compliance with GAEB.
- Additional information on files must be entered correctly.

If you do not know which settings can be processed by the destination program, you should structure projects based on the guidelines given below. The project suggested is structured in compliance with GAEB and can be read by all applications used for tendering, ordering and billing that have a certified GAEB interface.

Note: These are only suggestions – try out different options yourself!

Structuring Files in Compliance with GAEB Guidelines

The process of exchanging data using the GAEB format is based on file structures. This means that individual files and text are transferred rather than entire projects. It is therefore important that you create at least one file line in projects you want to transfer via the GAEB interface.

A file structure might look like this:

P*	Typ	Pos.-Nr	Kurztext	Le	DI
	Projekt		GAEB D81	M	
	Verzeichnis		Information Leistungsverzeichnis.1 Satz*	M	
	Bemerkung		Hinweis	M	
	Bemerkung		Hinweis	M	
	Titel		Einleitung	M	
	Titel		Bezeichnung der LV-Gruppe S2 1	M	
	Bemerkung		Hinweis	M	
	Pos.		Einr.Raeum.Vorh.	M	
	Summe/Ende		Summe Bezeichnung der LV-Gruppe S2 1	m	
	Bemerkung		Hinweis	M	
	Titel		Bodenbelagsarbeiten	M	
	Pos.		Belag aufnehmen PVC	M	
	Pos.		Belag aufnehmen PVC	M	
	Pos.		PVC homogen	M	
	Pos.		PVC homogen	M	
	Summe/Ende		Summe Bodenbelagsarbeiten	m	
	Summe/Ende		Summe Einleitung	m	
	Summe/Ende		SUMME Information Leistungsverzeichnis.1 Satz	m	
	Kosten		Kosten	M	

Assigning Categories and Types of Items in Compliance with GAEB Guidelines

The following item categories can be used without restrictions in GAEB-compliant files:

- **Normal item,**
- **Basic item,**
- **Alternative item,**
- **Requirement item,**
- **Contingency item,**
- **Inapplicable item**
  and
- **Work for hourly wage.**

Similarly, you can use the following item types without restrictions:

- **Normal item**,
- **Main description**,
- **Sub-description**,
- **Start of execution description**
  and
- **Block of execution description**.

Please pay careful attention to the following special features:

- Do *not* use the item categories **TextComment** or **TextItem** *within* files; use the **Comment** data record type *only*! The **TextComment** and **TextItem** item categories are used exclusively for pure "text files" (e.g."comments and technical contract conditions").
- Requirement and contingency items are **mutually exclusive** in files.
- When data is exchanged based on **DA 82**, items without total quantities must not be exported (i.e. no alternative or contingency items). Basic items are treated as normal items. Tenderer quantities must be specified as estimated quantities.

In addition, the basic rules for defining item categories and types apply.

Note: For a detailed description of item categories and types, please see the section entitled "Defining Item Categories and Item Types" in the "Tendering" chapter.

Setting up Files in Compliance with GAEB Guidelines

Files you want to exchange via the GAEB interface have to be set up in compliance with GAEB guidelines. The "Set up files in GAEB format" feature lets you set up files quickly and easily.

Allplan Quantities automatically creates a key for ordinal numbering (= ON key), which you can accept or modify (even at a later stage). Based on the format of this ON key, Allplan Quantities then sets up the entire file in ascending order.

The ON key, which consists of a maximum of nine digits, defines the format of the item numbers to be assigned. The characters of the ON key represent the number of digits for the individual levels in the hierarchy, the items and the item index.

For example, the ”1122PPPPI” ON key creates the following item number: ”01.22. 12a”. ”01” is the number of the first title in the hierarchy, ”22” is the number of the second title, ” 12” is the item number and ”a” the item index.

Note: The item index is not used in Allplan Quantities.

The result might look like this:

P*	Typ	Pos.-Nr	Kurztext	La	DI
	Projekt		GAEB D81	M	
	Verzeichnis		Information Leistungsverzeichnis.1 Satz*	M	
	Bemerkung		Hinweis	M	
	Bemerkung		Hinweis	M	
	Titel		Einleitung	M	
	Titel		Bezeichnung der LV-Gruppe S2 1	M	
	Bemerkung		Hinweis	M	
	Pos.		Einr.Raeum.Vorh.	M	
	Summe/Ende		Summe Bezeichnung der LV-Gruppe S2 1	m	
	Bemerkung		Hinweis	M	
	Titel		Bodenbelagsarbeiten	M	
	Pos.		Belag aufnehmen PVC	M	
	Pos.		Belag aufnehmen PVC	M	
	Pos.		PVC homogen	M	
	Pos.		PVC homogen	M	
	Summe/Ende		Summe Bodenbelagsarbeiten	m	
	Summe/Ende		Summe Einleitung	m	
	Summe/Ende		SUMME Information Leistungsverzeichnis.1 Satz	m	
	Kosten		Kosten	M	

Important!
Comments and the ‘Sub-description’ and ‘Execution description’ item categories are not set up automatically. You can use the ”Change item category” tool to assign consecutive numbers to these item categories when defining them.

GAEB-Compliant Units of Quantity

Allplan Quantities checks the entered quantity units to verify that they are commonly used and comply with the notation according to STLB-Bau. If you use a different quantity unit or notation/spelling, Allplan Quantities indicates this when checking the file for compliance with GAEB guidelines (cf. "Checking Files (see "Checking Files" on page 126)"). This does not mean that your entry is incorrect, but rather that you may need to clarify the quantity unit with the persons you will be exchanging the data with.

Important!
Units of quantity can consist of a maximum of four characters.

The following units of quantity are commonly used in GAEB-compliant files:

Unit	Meaning
d	Day
dam3	Cubic decameter (1000m³)
h	Hour
Jr	Year
kg	Kilogram
km	Kilometer
km2	Square kilometer
l	Liter
m	Meter
m2 *or* m²	Square meter
m3 *or* m³	Cubic meter
Mt	Month
psch	Lump sum
St	Piece
t	Ton
Wo	Week
md	Meters x days
mWo	Meters x weeks

mMt	Meters x months
m2d	Square meters x days
m2Wo	Square meters x weeks
m2Mt	Square meters x months
m3d	Cubic meters x days
m3Wo	Cubic meters x weeks
m3Mt	Cubic meters x months
m3km	Cubic meters x kilometers
Sth	Pieces x hours
Std	Pieces x days
StWo	Pieces x weeks
StMt	Pieces x months
St/M	Pieces per month
St/J	Pieces per year
tMt	Tons x months

Comments and Technical Contract Conditions

You can also exchange comments and additional contractual agreements (e.g. technical contract conditions) via the GAEB 90 interface. All you need to do is integrate them as text files in GAEB files before and/or after the file they are associated with.

Allplan Quantities generates the term ”Start of contractual agreement” for every text line and text comment line. Similarly, ”Text of contractual agreement” is assigned to long text entered in text windows using memo fields. Consequently, the text sum line is the ”End of contractual agreement”.

The result might look like this:

P*	Typ	Pos.-Nr	Kurztext	L	DI
	Projekt		GAEB D81	M	
	Text-Verzeichnis		Vertragliche Regelungen	M	
	Text-Bemerkung			M	
	Text-Bemerkung			M	
	Text-Bemerkung			M	
	Text-Bemerkung			M	
	Text-Summe/Ende		Ende Vertragliche Regelungen	m	
	Verzeichnis		Information Leistungsverzeichnis.1 Satz*	M	
	Bemerkung		Hinweis	M	
	Bemerkung		Hinweis	M	
	Titel	11	Einleitung	M	
	Titel	11.10	Bezeichnung der LV-Gruppe S2 1	M	
	Bemerkung		Hinweis	M	
	Pos.	11.10. 10	Einr.Raeum.Vorh.	M	
	Summe/Ende		Summe Bezeichnung der LV-Gruppe S2 1	m	
	Bemerkung		Hinweis	M	
	Titel	11.11	Bodenbelagsarbeiten	M	
	Pos.	11.11. 20	Belag aufnehmen PVC	M	
	Pos.	11.11. 30	Belag aufnehmen PVC	M	

Additional Information on Files

Additional information on files (such as ”information on the project” or ”information on the client”) cannot be displayed directly in the file structure.

You can use the **Properties of (name of file)** dialog box to enter additional information in an easy and comfortable manner, thus avoiding wrong entries.

Note: You can enter additional information for each file even when a project consisting of several files is to be exported in its entirety.

Checking Files

Before you export files via the GAEB interface, you should check that these files actually meet the requirements imposed by the GAEB guidelines.

A log indicates whether errors have been detected. You might see the following messages:

- When this message is displayed, the file complies with the GAEB guidelines and can be exported.

- When this message appears, the file contains errors. Correct the error causes indicated in the log and check the file again.

Exporting Files to GAEB Files

There are two ways to export files to GAEB files:

- You can export a single file to a GAEB-format file by placing the insertion marker in the file line of the relevant file before you start the export.
- You can export several files (e.g. file with text file) to a GAEB-format file by placing the insertion marker in the folder/project line of the level in the hierarchy that is superordinate to the relevant files.

Note: When exporting files with contractual agreements (= file with text file), make sure that the insertion marker is positioned correctly: to export a file including contractual agreements to a GAEB-format file in a single step, you need to place the insertion marker in the superordinate folder/project line. To add a file (e.g. a text file) to a file that has already been exported to a GAEB file, you need to position the insertion marker in the relevant file line.

Options for GAEB export

Advanced settings are available for exporting data to GAEB-format files. You can use the **GAEB Options** tab in the **Properties of (name of file)** dialog box to make these settings, which can vary depending on the GAEB phase.

Allplan Quantities provides a number of special settings for exporting data to GAEB 90-format files.

Importing GAEB Files

GAEB-format files can be imported into Allplan Quantities via the GAEB interface. Imported files can be inserted in existing projects or in new projects you create during import.

Note: To import prices from proposals in DA 84 format, you have to take into account the special features that are described in the section that follows.

Importing Prices from DA 84-Format Files

GAEB-format files of data type 84 (= proposal delivery) contain additional data that is created by tenderers only. Consequently, when you import GAEB files in the DA 84 format, Allplan Quantities does not create a complete structure. Rather, the data (prices, quantities, additional text etc.) the tenderer has entered in the GAEB file is added to the existing file structure (= file in an existing project).

Before the GAEB data is actually imported, Allplan Quantities scans the current project for the file in the GAEB file. The search criterion is the short text of the file. When the file is found in the project (otherwise, the GAEB data is not imported correctly), Allplan Quantities displays all the tenderers created for this file. The data in the GAEB file can then be copied to an existing or new tenderer.

If Allplan Quantities does not find the file (in this case, the file has changed in the meantime), you can select a file to which the prices are to be copied.

During import, Allplan Quantities checks that the data (i.e. item numbers, item categories, prices, quantities, additional text etc.) is consistent and complete. If errors are detected, a log is generated. In this case, the file has changed in the meantime. Consequently, the proposal is invalid!

Printing Cost and Quantity Calculations

In particular, project-specific data sheets include large volumes of data of different types. To generate printouts of overviews, cost calculations or quantity calculations etc., Allplan Quantities only requires certain types of data from the respective data sheet; these should be clearly arranged on the printout. To accomplish this, reports (= print templates) are provided which serve as the basis for every printout.

Using these reports, you can specify

- which data of a data sheet is to be printed out,
- which additional text (e.g. headings, list headers, footers) and images (e.g. logos) are to be included in printouts and
- what layout the printout should have.

Various predefined reports are available for each data sheet. For example, you can create printouts of files based on various layouts as well as print cost calculations with or without quantity calculations from within the **Calculation** data sheet.

Allplan Quantities provides such a wide choice of reports with a vast number of details that it is hard to remember everything. To make thing easier, you can look up the most important information on each report directly in the **Info** tab of the **Print** dialog box.

Printing is easy. All you do is:

- Define the contents of the printout and select the data you want to print. For example, place the insertion marker in the data line where printing is to start and display the data records to be printed.
- Then open the **Print** dialog box.
- If required, change the layout template in the **Output** tab and set other report options.
- Set up the printer and start printing.

Note: You can use the report designer to modify and customize reports or to create new reports. How this is done is described in detail in the ”Editing reports” section.

Defining the Contents of the Printout and Preselecting Data

Allplan Quantities always prints the data of the open and active data sheet. In addition, printouts always include

- the data line where the insertion marker is located and
- all data lines that are hierarchically subordinate to this data line.

Thus, the contents of the printout is always defined by the position of the insertion marker in the data sheet *before* you open **Print** dialog box. Allplan Quantities initially assembles the printout based on the data line in which you have currently placed the insertion marker and all data records that are hierarchically subordinate to this line. For printing, it is important whether or not the subordinate data records are visible. Only the *visible* data records will be printed.

If you have *selected* subordinate records, only the selected records will be printed. In this case, it does not matter whether or not these data records are visible.

Open the "Print" Dialog Box and Select Print Settings

After you have defined the contents of the printout and selected the data, open the **Print** dialog box.

This dialog box usually displays all reports for selection that are available for the active data sheet. To make it more convenient for you to find the desired report, the reports are grouped. You can also create your own report groups, e.g. for frequently used reports or for user-defined reports.

In the **Output** tab of the **Print** dialog box, you can select the print settings to be used for the current printout. Click the "More options" button to display general print settings.

Selecting Advanced Print Settings

Before printing your files, you can define some advanced print settings using a layout template. This includes the footer text to be printed and the logo you want to integrate in the printout.

You can define the following defaults in the **Print** tab of the **Settings** dialog box:

- change footer text that is to be printed at the bottom of each page (e.g. your office contact data),
- add your company logo,
- create your own layout templates or
- set the directory where the currently required reports are stored (this means that it is possible to change the current report path without exiting the **Print** dialog box).

ATTENTION!
These settings will be valid for all reports that come with Allplan Quantities and can only be changed in the way described here.

Checking Printouts in the Preview

Before you start printing, you can open the **Preview** dialog box and review the printout you prepared. The pages can be displayed in two different modes: whole page or zoomed in.

Note: If you open a print job instead of a single report in the preview, you need to close the preview for each report included in the print job (example: a print job contains 4 reports -> you need to close the preview 4 times).

Analyzing and Evaluating Quantity Takeoff Schedules

Basic functions using standard tools

You can use all the basic functions provided in Allplan Quantities to analyze and evaluate imported CAD data.

Graphical price comparison lists and reports in particular facilitate the procedure of analyzing and evaluating objects designed using Allplan at any stage.

Special functions

Besides the standard tools, Allplan Quantities provides special reports for analyzing and evaluating files and element schedules that have been created based on CAD data.

Tip: You will find an overview of the most important information on each report in the **Info** tab of the **Print** dialog box.

When you install Allplan Quantities, these reports are usually stored in the directory `...Data\Nemetschek\Allbase\Daten\Berichte\Extended.V2014`. If you will be using these reports regularly, set the default report path to this directory.

Editing Reports

The report designer provides a convenient way of editing reports.

This chapter provides detailed information on the following topics:

- The report designer in general and how to open this tool
- Creating and modifying reports
- Customizing reports
- Adding fields and defining variables
- Defining conditions for printing objects
- Defining specific controls for reports
- Exporting/backing up and restoring reports

What is the Report Designer?

Reports are used to specify what is to be printed out and how: Reports define the design, contents and graphical appearance of printouts as well as the objects, text and fonts in printouts.

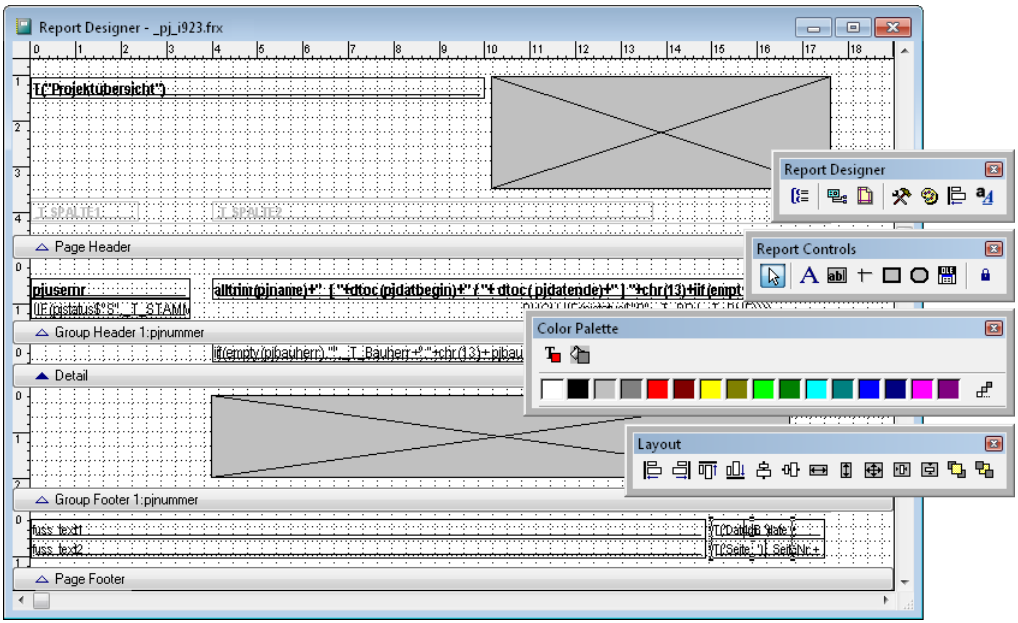
In other words, the report designer is a comfortable tool you can use to define the form and contents of reports and consequently of printouts. You can modify existing reports or create new reports.

The sections that follow provide detailed information on

- the layout window of the report designer,
- the tools in the report designer and
- the toolbars in the report designer.

Layout Window of the Report Designer

When you open the report designer, the program automatically displays the layout window and the **Report Designer** and **Report Controls** toolbars (to show the other two toolbars, click the **Layout** and **Color Palette** icons on the **Report Designer** toolbar).



To edit the printout templates, you can use the **File**, **Edit**, **Format** and **Report** menus and the toolbars (cf. sections entitled "Tools in the report designer" and "Toolbars in the report designer").

You can use the layout window to insert objects (text, fields, lines, rectangles, images etc.) in reports or edit existing objects. The file name of the report is displayed in the title bar of the layout window.

The layout window itself shows the individual sections of a report and the objects in these sections. You can quickly and easily define the size of sections - all you need to do is position the cursor on the bar with the section name displayed at the bottom of each section so that the cursor becomes a double-headed arrow. Now press and hold the left mouse button and drag to change the size.

Note: The field names are displayed in the layout window of the report designer. The print preview and the final printout include the actual data from the data sheet.

Reports consist of individual sections, which are separated by bars. All these sections together define the printable area of the paper.

Each section, which is delimited by a bottom bar displaying the name of the section, can include objects. The sections are described in the table below.

Section	Meaning
Page header	The page header appears at the top of every page. Besides predefined information (e.g. heading and list heads), it also includes variable data (e.g. number of pages and date).
Detail	The detail section contains the fields that are associated with the data in the data sheets. This section is printed out for every data record.
Page footer	The page footer appears at the bottom of every page. In addition to text, the footer can also include variable data (e.g. number of pages and date).
Group header/footer	Group header and group footer are only available when data has been grouped by common characteristics and contain information that is only relevant to the data group in question. The group footer may include a sub-total, for example.
Optional Bands	The report title and report summary are defined separately and appear at the beginning and/or end of a printout (e.g. cover sheet and/or final note) or on separate pages (optional).

Tools in the Report Designer

The tools needed for editing layout templates are provided on the **File**, **Format** and **Report** menus and on the standard Windows **Edit** menu (not described here).

Tools on the "File" Menu (report designer)

You can use the tools on the **File** menu to save modified or new reports, discard your most recent changes and define the page layout.

Tool	Use
Save	You can use this tool to save the changes you made to a report.
Save As HTML	You can use this tool to save reports in HTML format.
Revert	You can use this tool to discard the changes you have made to a report. You can go back (undo) as many steps as you want, as far back as the last time the report was saved.
Page Setup	You can use this tool to define the page layout of a report.
Print	You can use this tool to print out reports for checking purposes.

Tools on the "Format" Menu

The **Format** menu includes tools you can use to edit objects in reports.

These tools can only be applied when at least one object is selected.

Tool	Use
Align	You can use this tool to align selected objects. Choose one of the options provided on the submenu.

Tool	Use
Size	You can use this tool to modify the size of selected objects. Choose one of the options provided on the submenu.
Horizontal Spacing	You can use this tool to modify the horizontal spacing of selected objects.
Vertical Spacing	You can use this tool to modify the vertical spacing of selected objects.
Bring to Front	You can use this tool to move the selected objects to the front.
Send to Back	You can use this tool to move the selected objects to the back.
Group	You can use this tool to group selected objects.
Ungroup	You can use this tool to explode the selected object group into its constituent objects.
Snap to Grid	You can use this tool to place objects so that they are aligned with the grid for snapping points (option enabled). Alternatively, you can place them freely (option disabled).
Set Grid Scale	You can use this tool to set parameters for the point snap grid.
Font	You can use this tool to define the font or font size for selected text objects.
Foreground Color	You can use this tool to define the pen color for selected text or drawing objects.
Background Color	You can use this tool to define the background color or fill color for selected drawing objects.
Text Alignment	You can use this tool to specify whether the selected text objects are left-aligned, right-aligned or centered or define the spacing between lines.
Fill	You can use this tool to apply hatching styles or fills to rectangles and rectangles with rounded corners.
Pen	You can use this tool to define the linetype and line width for selected lines, rectangles and rectangles with rounded corners.
Backstyle	You can use this tool to specify whether selected objects are fully opaque or transparent.

Tools on the "Report" Menu

The **Report** menu contains tools for creating new objects or reports.

Tool	Use
Quick Report	You can use this tool to insert all necessary fields in a new report. This tool is only available when the detail section is empty.
Run Report	You can use this tool to print out the report as currently set for checking purposes. You do not need to save it.
Print Preview	You can use this tool to show the report in print preview
Load Data Environment	You can use this tool to define the data environment; however, this is not necessary for Allplan BCM.
Private Data Session	You can use this tool to activate database functionality that is not supported by Allplan Quantities. This option should *always be disabled*.
Printer Environment	You can use this tool to activate database functionality that is not supported by Allplan Quantities. This option should *always be disabled*.
Optional Bands	You can use this tool to insert the ”report title” and/or ”report summary” sections.
Data Grouping	You can use this tool to group selected objects.
Variables	You can use this tool to define variables for reports.
Default Font	You can use this tool to make default settings for the font and font size, which are to be used for new text objects.
Edit Bands	You can use this tool to select individual sections whose parameters you want to edit.
Insert Control	You can use this tool to insert control elements.
Properties	You can use this tool to set the paper size, page layout and default font.

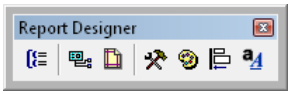
Toolbars in the Report Designer

The report designer features four toolbars for quick access to frequently used tools: the **Report Designer**, **Report Controls**, **Color Palette** and **Layout** toolbars.

They provide easy-to-use tools for editing reports.

Buttons in the "Report Designer" Toolbar

When you click one of the buttons, the program selects the relevant tool or displays an additional toolbar.



Icon	Function	Use
	Data Grouping	You can use this tool to group selected objects.
	Data environment	You can use this tool to define the data environment, which is not necessary for Allplan Quantities.
	Page setup	You can use this tool to set the paper size, page layout and default font.
	Report controls	You can use this tool to show and hide the **Report Controls** toolbar (see "Buttons in the "Report Controls" Toolbar" on page 143).
	Color palette	You can use this tool to show and hide the **Color Palette** toolbar (see "Buttons in the "Color Palette" Toolbar" on page 144).
	Layout	You can use this tool to show and hide the **Layout** toolbar (see "Buttons in the "Layout" Toolbar" on page 145).

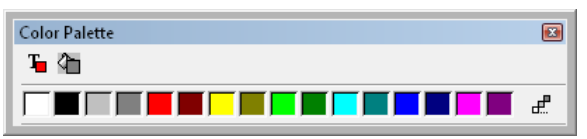
Buttons in the "Report Controls" Toolbar

When you activate a tool on the **Report Controls** toolbar by clicking a button, the program executes the relevant function and then automatically displays the **marker** again.

Note: However, you can also ”fix” tools: double-click to select a tool or select a tool and then click **Repeat control element**.

Icon	Function	Use
	Marker	You can use this tool to select objects.
	Text tool	You can use this tool to enter or modify text (see ”Inserting Text Objects” on page 152).
	Field tool	You can use this tool to insert fields.
	Line tool	You can use this tool to insert horizontal or vertical lines.
	Tool for rectangles	You can use this tool to insert rectangles.
	Tool for rectangles with rounded corners	You can use this tool to insert rectangles with rounded corners.
	Tool for OLE objects	You can use this tool to insert OLE objects (images and sketches) (see ”Insert Images and Sketches” on page 153).
	Repeat control element	You can use this tool to fix the active tool and insert several objects of the same type.

Buttons in the "Color Palette" Toolbar



Icon	Function	Use
	Foreground color	You can use this tool to define the foreground color for objects.
	Background color	You can use this tool to define the background color or fill color for objects.
	Other colors	You can use this tool to open a dialog box in which more colors are presented for selection.

Buttons in the "Layout" Toolbar

Icon	Function	Use
	Align left sides	You can use this tool to align the selected objects left.
	Align right sides	You can use this tool to align the selected objects right.
	Align top edges	You can use this tool to align the selected objects so that their top edges are flush.
	Align bottom edges	You can use this tool to align the selected objects so that their bottom edges are flush.
	Align vertical centers	You can use this tool to align the selected objects so that their vertical axes are centered.
	Align horizontal centers	You can use this tool to align the selected objects so that their horizontal axes are centered.
	Same width	You can use this tool to assign the same width to the selected objects.
	Same height	You can use this tool to assign the same height to the selected objects.
	Same size	You can use this tool to assign the same size to the selected objects.

Icon	Function	Use
	**Center horizontally**	You can use this tool to horizontally center the selected object. When you select several objects, they are centered as a group.
	**Center vertically**	You can use this tool to vertically center the selected object. When you select several objects, they are centered as a group.
	**Bring to front**	You can use this tool to move the selected objects to the front.
	**Send to back**	You can use this tool to move the selected objects to the back.

Creating and Modifying Reports

The form and contents of printouts can be modified in different ways:

- You can copy an existing report and then modify this copy. The original report is not affected by this operation.

  Important!
  This procedure *must be used for all original Allplan BCM reports* because these reports cannot be modified!
- You can modify an existing report directly.

  Important!
  This approach is only available with *your own reports* and *copies of the original reports*!
- You can create a new report.

Copying a report

If an existing report is more or less sufficient for the task at hand and you only need to make minor changes, you can simply copy the relevant report and modify the copy.

Important!
This procedure *must be used* for all standard reports provided by Allplan Quantities in order to keep the originals.

Modifying an existing report

To modify an existing report, open the relevant report in the report designer, make changes and save the modified report.

Note: To change the *original* Allplan BCM reports, you need to copy them first and then *modify the copies*.

Creating a new report

To create custom reports, it is best to start from scratch.

In other words, create a new report and adapt it to your needs and requirements.

Customizing Reports

The report designer offers various options for defining the graphical appearance of printouts. In particular, you can

- Define the page layout
- Add a report title and report summary
- Specify the height of the individual sections
- Select, group and position objects and change their size
- Enter and format text (e.g. headings or list heads)
- Enhance the visual appearance by adding graphical elements (e.g. colored lines and rectangles) or images (e.g. logos)

The quickest way to design a report is to insert all text lines, images, lines and rectangles, select all the objects to be edited in the same way (e.g. select all the text lines to give them a uniform appearance by assigning the same font and size) and make changes.

Note: You can check the graphical appearance of printouts on screen. Click the right mouse button and select **Preview** on the shortcut menu. This preview shows all the data records of the data sheet, regardless of the insertion marker's position in the data sheet and the selected data records.

Object Types of Reports

Reports can include different types of objects, which are described in the table below.

Object type	Function
Text object	Text that is not included in data sheets is inserted as text objects in reports (see "Inserting Text Objects (on page 152)").
Field object	Field objects are associated with the columns of the data sheet to which the report is assigned (cf. "Using Fields and Variables").
Drawing object	Linear and rectangular objects can be used to enhance the graphical appearance of reports (cf. "Adding Graphical Elements").
OLE object	Objects from other Windows applications can be integrated as files or links in reports (cf. "Inserting Images and Sketches (see "Insert Images and Sketches" on page 153)").

You can define conditions for every individual object or for entire groups of objects, which are taken into account when printing.

Define the Page Layout for Reports

You can define the page setup of reports. In other words, you can specify how sections and objects are arranged in printouts.

To define the page layout

➲ The layout window of the report designer is open.

1 Click **Page setup** on the **File** menu.

The **Report Properties** dialog box appears.

2 Select the **Page Layout** tab and make the necessary settings.

Note: You can change the unit of measurement in the **Ruler & Grid** tab (e.g. from "cm" to "pixels").

3 Click **OK**.

Add or Remove a Report Title and Report Summary

Report titles and summaries are independent sections that are defined separately. The objects in these two sections always print out just once: The report title appears at the beginning of a printout and the report summary at its end.

This way, you can add a cover sheet and/or final note to a file. It is even possible to display the title and summary on separate pages.

To add a report title or summary

➲ The layout window of the report designer is open.

1 Click **Optional Bands** on the **Report** menu.

The **Report Properties** dialog box appears.

2 Select the **Optional Bands** tab and activate the **Report has title band** option and/or the **Report has summary band** option.

3 Choose the other options, as required.

4 Click **OK**.

To remove a report title or summary

➲ The layout window of the report designer is open.

1 Click **Optional Bands** on the **Report** menu.

The **Report Properties** dialog box appears.

2 Select the **Optional Bands** tab and deactivate the **Report has title band** option and/or the **Report has summary band** option.

3 Click **OK**.

Specify the Height of Sections in Reports

You can enter any height for the individual sections. However, check that the final printout (= all sections) does not exceed the printable area of the paper.

You can specify a minimum height or set a fixed value for the height. When you enter a minimum height for a section, please make sure that all objects actually fit in the relevant section.

To specify the height for a section

➲ The layout window of the report designer is open.

- Drag the bar that delimits the section to the required height.

Or:

1 Double-click the bar delimiting the relevant section.

The **... Band Properties** dialog box appears.

2 Select the **General** tab and enter the **height**.

Note: You can change the unit of measurement in the **Ruler & Grid** tab (e.g. from "cm" to "pixels").

3 Activate the **Constant band height** option if you do not want the section to be resized automatically (e.g. when adding data or deleting empty lines). This is necessary e.g. when printing reports on labels.

4 Define an expression for the section, if required, by clicking  next to **On entry** or **On exit** under **Run expression**.

Detailed information is provided in the section entitled "Define Expressions".

5 Click **OK**.

Selecting Objects in Reports

Use the **Marker** on the **Report Controls** toolbar (see "Buttons in the "Report Controls" Toolbar" on page 143) to select objects (see "Object Types of Reports").

The selected objects (any combination possible) can be addressed as a single entity for easy manipulation. You can use the Cut, Copy, Paste and Delete tools as you would in any other Windows application.

Selected objects can be grouped, moved and superimposed. In addition, you can change the size of objects (not available with text objects). Rulers and grids assist you in the process of positioning objects.

Grouping Objects

You can combine several objects (see "Object Types of Reports") in a group that can be selected, cut, copied, deleted, pasted and moved as a single entity. For example, text and lines of a header can be combined in a group and placed as a whole.

Object groups facilitate the process of positioning objects. As opposed to data groups (consisting of fields and variables), however, object groups have *no* effects on printouts.

Positioning and Resizing Objects

Rulers and grids provide additional support as you position objects (see "Object Types of Reports") or change their size. The spacing between the lines of the ruler and a unit of measurement can be set in the **Ruler & Grid** tab of the **Report Properties** dialog box.

You can activate or deactivate the grid using the **Snap to Grid** tool on the **Format** menu.

You can define the size of field objects, drawing objects and OLE objects as you need. The size of text objects, on the other hand, is determined automatically and depends on the text length, font and font size.

Inserting Text Objects

Use the **text tool** in the **Report Controls** toolbar (see "Buttons in the "Report Controls" Toolbar" on page 143) to create fixed text and labels. You can set the **Text tool** to active with **Repeat control element** to create a number of text objects in succession.

New text objects are always inserted using the formatting (font and font size) you have defined in the layout settings as the default font for the report (see "Defining the Page Layout for Reports (see "Define the Page Layout for Reports" on page 148)"); you can change these defaults at any time.

You can of course also modify the formatting of existing text objects any time you like. In addition, you can apply the same font to *all* the objects in a report in a single step; this also includes all text objects in the report (see "Designing Typography and Typesetting (on page 152)").

Designing Typography and Typesetting

The report designer provides many features with which you can freely design the typography and typesetting of text objects and fields containing text and numbers, as far as supported by your operating system.

Each object you newly add to a report is automatically formatted according to the font and font size you have defined as the default font in the layout settings for the report (see "Defining the Page Layout for Reports (see "Define the Page Layout for Reports" on page 148)"). You can modify this formatting any time later using one of the methods described below.

You can also freely place objects and choose if you want a fixed offset to the top or bottom of the section (see "Positioning and Resizing Objects"). The "Fix relative to top of band" setting is the default.

Adding Graphical Elements

You can enhance printouts by adding lines and color areas. The report designer provides a number of options. In particular, you can

- Insert vertical and horizontal lines
- Add rectangles, rectangles with rounded corners, circles and ellipses as frames or color areas
- Apply color areas or hatching styles to objects (e.g. text)

Note: On black/white printers, these areas will appear as gray tones.

Insert Images and Sketches

You can either insert images and sketches directly in your report (e.g. add your company logo to the page header) or load them into the printout from fields in the relevant data sheet columns (e.g. implementation sketches for items).

Using Fields and Variables

”Fields” are used to integrate the data in the columns of the data sheets in printouts. When printing, Allplan BCM processes all the data records one after the other. The data in the fields is checked and the results are listed in the printout.

Fields can even be calculated or include variables. ”Variables” are used to save values or calculation results. Besides predefined variables, you can define further variables for each report. Functions are used to link fields and variables.

You can also group this data. This way, you can print out each group (title with items) on a new page, for example.

Field types and variable types

Field/variable types describe the type of data to be output. The type is given in the list boxes in the Output window.

ID of type	Data type
C	Alpha-numeric (field length limited to 254 characters)
D	Date
F	Floating point number
G	Object
L	Logical
M	Alpha-numeric (memo fields of unlimited length)
N	Numeric

Fields in data sheets

A field is available for each column in the data sheets. In addition, there are some fields that are used to classify data more precisely. You will find a list of the most important fields and their properties in the online help under "Fields in Data Sheets". Please note that fields Allplan BCM uses only internally are not listed here.

Defining variables

Variables are used to save values or calculation results. Variables can be defined as fields in reports or as parts of expressions. They are available in the **Variables** list box in the **Expression Builder** dialog box. However, they can only be used for the report for which they have been defined. The reports that come with Allplan BCM also include variables, the page number, for example.

Variables can also be integrated in calculations. The program starts with the initial value and the result is saved in the variable.

Predefined Allplan BCM variables

You can use the variables listed below in expressions for executing reports and in initialization/finalization procedures.

Name of variable	Data type	Use
_ZV_SEITE	Numeric	Page number at which to start printing. This variable contains the value of the **First page** data entry box of the **Report manager** dialog box.
_ZV_LOGO	Numeric	1 = the **Print logo** option is enabled. 0 = the **Print logo** option is disabled.
_ZLGO.BR_LOGO	Object	Image object of logo.
_ZV_FUSS1 **_ZV_FUSS2**	Character	Variables for the text that appears in the footer. You can enter this text when you click the **More options** button in the report manager.
_ZV_DATE	Date	Date specified in printouts. This variable contains the value of the **Date** data entry box of the **Report manager** dialog box.

The most important functions

Functions are used to link fields and variables. The table below only lists the functions that are used in reports.

Note: More functions available in Allplan Quantities are described under "The most important functions" in the online help.

Function	Meaning
evaluate(var)	Ensures that a report can be used for all data sheets. The value in the open data sheet is always used.
Character functions	
"Text"	Compares character by character.
ALLTRIM(expC)	Removes blanks from character strings.

Logical functions	
=	Boolean operator: ”equal”
NOT or !	Logical negation (the expression is true if the following value is not true).
AND	Boolean operator: ”and” (the expression is true if both values are true).
OR	Boolean operator: ”or” (the expression is true if one of the two values is true).
EMPTY(exp)	Checks whether fields or variables are empty.
IIF(,,)	Function with syntax: ”if *condition*, then....; else .....”. If the condition is true, this function yields the ”then” value. If the condition is not true, this function yields the ”else” value.
Date functions	
DATE()	Returns the current system date.

Inserting fields

You can use the **Field** tool to insert a single field in a report where you require.

As an alternative, you can click the **Quick Report** tool to open the **Quick Report** dialog box. Here you can use tables to select several (or all) fields that exist for a data sheet. The selected fields are automatically placed in the detail section.

Note: The **Quick Report** tool is only available when the default detail section in the report is empty and no further detail sections have been added.

Defining expressions

An expression consists of data sheet fields and/or variables that can be linked using various functions. The expression defined is applied to each data record you have selected.

You can specify expressions to

- Define fields
- Define conditions which are taken into account when objects are printed
- Group data
- Define variables (assigning initial values and values to store)

Expressions are usually defined using the **Expression Builder** dialog box, which contains four list boxes you can use to select functions from various groups. The Expression for **Field** on **Report field** displays the selected functions, fields and variables. The expression could also be entered directly in this field; however, this should only be done by database experts.

The **Variables** list box shows all the variables (including name and type) that have been defined for the current data sheet. For more information, see the "Defining variables" section above.

Formatting fields

The format defines how a value is displayed in printouts. Formatting typical of field data specifies that uppercase letters are used for all alphabetical characters, for example.

Grouping data

Grouping data means that data records are grouped based on a common feature. For example, you can print out each group on a new page and assign headers and footers to each group. Groups are changed when the value of the grouping condition changes. Groups can also be nested.

Inserting images from fields

Sketches you have added to projects (**Image** column) can be integrated in reports using a table field.

Defining Conditions for Printing Objects

You can define conditions which are taken into account when objects are printed out. Conditions can be specified for each object. For example, you can define that short text is only printed for item lines.

Specific Controls for Reports

Reports can be controlled using a specific template.

The initialization procedure for reports consists of two parts:

- Part 1: Mask control
- Part 2: Report control

Note: When using print jobs, a few special notes need to be observed.

Specific Mask Control

The mask control is used to create dialog elements in the bottom half of the **Output** tab in the **Print** dialog box. The mask control is defined in the **Initialization procedure** dialog box and indicated in the following way:

```
#MASK
.....
.....
.....
#ENDMASK
```

You can define up to six mask elements in this section. If more than six elements are specified, they are ignored. The elements created are immediately displayed in the **Output** tab of the **Print** dialog box.

The most important functions for creating and controlling mask elements are described in the online help under "The most important functions".

Specific Report Control

The report control corresponds to the print feed feature known from versions earlier than V6.0. The report control is indicated in the print feed in the following way:

```
#PROG
.....
.....
.....
#ENDPROG
```

You can use the report control to make the proper configuration settings, check filter conditions etc. In addition, you can determine the specific settings made in the mask control, which can also be determined directly in the report, however. Reports created in previous versions of course can also be used without the specially indicated sections.

The most important functions for controlling reports are described in the online help under "The most important functions".

Important!
The elements created are only effective for as long as the report is selected within the **Print** dialog box. When you switch to another report, the specific elements change accordingly.

Special Notes on Print Jobs

In print jobs, feeds can be defined in two different ways:

- Using the feeds of the individual reports
- Using the feed of the print job

Using the feeds of the individual reports

The sections from **#PROG** to **#ENDPROG** in the individual reports are executed.

If you want to use mask options, a **#MASK .... #ENDMASK** section must be added to the print job. In this section, you define the options for all subsequent reports. When creating a new print job, this section is created automatically based on all mask control sections of the individual print jobs. In most cases, however, you will need to edit this mask section manually.

Example:

The print job includes the following section:

```
#MASK
_PRMSK_CHECK("chk1","Print prices",0)
_PRMSK_CHECK("chk2","Printout based on StLB",1)
#ENDMASK
```

For all reports controlled by the print job, this means that the variable – in this example, the one controlling the printout of prices – must be named "chk1" *in every report*. This requirement must always be met; otherwise, contradictions might occur. To inform the user, the element created is displayed as inactive in the mask.

Example:

Report 1 includes a variable "chk1", which controls the printout of prices. Report 2 also contains a variable named "chk1". This variable, however, controls color printouts. If the relevant element created in the mask control of the print job is assigned the name "chk1", this element controls both the printout of prices and color printout.

Using the feed of the print job

The print feed is defined in the same way as for an individual report. Controls specified in the individual reports are suppressed.

Backing up and Restoring Reports

The quick reports provided by Allplan BCM are usually installed along with the program files when you install Allplan BCM. You can re-import them anytime without having to run setup again.

Reports you have newly created or modified can be backed up separately and restored when needed.

Backing Up Data and Archiving Projects

Data backup is one of the most important topics in the IT industry. Even if you are working with large amounts of data without being confronted with any problems, it is a topic you cannot afford to ignore. Not only hardware failure, but also user error can cause valuable data to be lost irrevocably. It is therefore essential that you save all the data regularly, as otherwise several man hours, weeks or even months of work might be irretrievably lost.

ATTENTION!
Back up your master data, projects and other important data regularly! We also strongly recommend backing up all data before installing a program update!

Various options are available:

You can back up

- all the data relevant to Allplan Quantities
- specific projects using the Archive Administration tool
- particular user-specific data (e.g. macros and filter conditions) using the Resource Administration tool
- various other user-specific data (e.g. addresses, images, reports and settings)

Full Backup

The safest method is to perform a full backup, which includes *all* the *data relevant* to Allplan Quantities – ranging from projects, masters and element catalogs to data saved in the image and address databases to your own custom settings and definitions to reports you

have modified or created – in other words, all project-specific and user-specific data is backed up.

You should always use this method to back up all the data at regular intervals. The other procedures described in the section entitled "Backing up User-Specific Data" should be used for exceptional cases only.

Backing up and Archiving Projects Using the Archive Administration Tool

In normal circumstances, you use the archive administration tool provided by Allplan Quantities to save and archive projects, item catalogs and element catalogs. This tool is also used to export projects from the current data directory or to import projects into this directory.

When you are archiving a project, Allplan Quantities saves the project data in a directory you specify. The original project data in your current data directory is not affected by this operation so that you can continue to edit this project without any restrictions. As projects are archived in compressed format, they take up less space in the archive (only about 10% of the original space).

In addition, Allplan Quantities' archive administration tool offers the options to archive projects with password protection and to check out projects. When a project is checked out, it is saved in the archive directory and locked. As a consequence, the project in the current data directory it is no longer available for further editing. This way, you can make sure that this project is not being edited while it is checked out. More detailed information is provided in the section entitled "Access Rights for Archiving".

You can use any directory that is accessible and shared for archiving. In other words, floppy disks or, when you are working in a network, directories on a central computer (= network server) can also be defined as archives. The number of archives is only limited by the amount of free space on the hard disk or by the floppy disk's storage capacity.

Important!
You can only save and archive projects in existing directories (= folders). If necessary, use Windows Explorer to create a directory before you back up data.

Backing up Data Using the Resource Administration Tool

You can use the resource administration tool to export *user-specific* data from the current directory to any archive and to import it from any archive into the current directory. The resource administration tool is a useful addition to Allplan Quantities' archive administration, which allows you to back up/archive and restore *project-specific* data.

Here, the term "resources" encompasses in particular

- conditions defined for analyzing and evaluating data sheets (cf. Analyze Data Sheet),
- conditions defined for modifying column contents (cf. Change Column Contents),
- conditions defined for organizing, filtering and selecting data records (cf. Organize and Filter),
- predefined or user-defined macros (cf. Macros) and
- existing notes (cf. Pin Board).

When you open the **Resource administration** dialog box by clicking the **Administration of resources** tool on the menu, you can edit *all* resource types. When you open the dialog box by clicking the **Administration** button in any of the dialog boxes listed above (either directly or via the **Selection of libraries** dialog box), only the resources of the current resource type are displayed. In that case, the display is automatically filtered based on the resource type; this filter cannot be modified.

Backing up Other User-Specific Data

Tip: You can make your data sheet settings or column definitions available on a different computer. All you need to do is copy the specified files to the corresponding directories on the destination computer.

Here, the term ”user-specific data” encompasses all the data that you can create, modify or define while you work with Allplan Quantities and that is not managed by the archive administration tool. This data includes addresses (see ””Address Overview” Data Sheet” on page 42) stored in the address database and objects (see ””Image Overview” Data Sheet” on page 44) in the image database.

If you have customized default settings or data sheet settings, it is advisable to regularly create backups of those files, as well. Which files need to be included in backups is described in detail later in this section.

Tip: You can also transfer reports to a different computer. How this is done is also described in this section.

Reports modified or created using the report designer should also be backed up regularly; this is particularly important before you install a program update.

Back up and Restore the Address Database

To back up address data

1 Exit Allplan Quantities.

2 Copy the `ADRESS.DBF`, `ADRESS.FPT` and `ADRESS.CDX` files in the directory `...\Allbase\Daten\Adressen` to a backup directory or floppy disk.

To restore address data

1 Exit Allplan Quantities.

2 Copy the `ADRESS.DBF`, `ADRESS.FPT` and `ADRESS.CDX` files from your backup directory to the `...\Allbase\Daten\Adressen` directory.

ATTENTION!
This operation replaces all the addresses currently stored in the address database with the addresses from the backup files!

Back up and Restore the Image Database

To back up objects

1 Exit Allplan Quantities.

2 Copy the BILD.DBF, BILD.FPT and BILD.CDX files in the directory ...\Allbase\Daten\Verw to a backup directory or floppy disk.

To restore the objects

1 Exit Allplan Quantities.

2 Copy the BILD.DBF, BILD.FPT and BILD.CDX files from your backup directory to the ...\Allbase\Daten\Verw directory.

ATTENTION!
This operation replaces all the objects currently stored in the image database with the objects from the backup files!

Export/Back up and Restore Default Settings

To back up default settings

1 Exit Allplan Quantities.

2 Copy the EDITORS.DBF, EDITORS.FPT and EDITORS.CDX files in the directory ...\Allbase\Daten\Verw to a backup directory or floppy disk.

To restore the default settings

1 Exit Allplan Quantities.

2 Copy the EDITORS.DBF, EDITORS.FPT and EDITORS.CDX files from your backup directory to the ...\Allbase\Daten\Verw directory.

Export/Back up and Restore Data Sheet Settings and Column Definitions

To export or back up settings and column definitions

1 Click **Scheme** on the **Extras** menu.

The **Scheme** dialog box appears.

2 In the **Scheme** list box, select to the scheme you want to export/back up.

3 Click **Export scheme**.

4 Select the target directory in the **Save as** dialog box.

5 Click **Save**.

To restore settings and column definitions from backup files

1 Click **Scheme** on the **Extras** menu.

The **Scheme** dialog box appears.

2 Click **Import scheme**.

3 Specify the source directory in the **Open** dialog box.

4 Select the relevant scheme and click **Import**.

Export/Back up and Restore Toolbars

To export/back up a toolbar

1 Close *all* the data sheets.

2 On the **Extras** menu, point to **Customize** and click **Office**.

The **Configure office toolbars** dialog box appears.

3 Click **Export toolbar**.

4 In the **Save as** dialog box, select the target directory and enter a file name, if necessary (leave the `*.ART` file extension unchanged).

5 Click **Save**.

To restore a toolbar from backup files

1 Close *all* the data sheets.

2 On the **Extras** menu, point to **Customize** and click **Office**.

The **Configure office toolbars** dialog box appears.

3 Click **Import toolbar**.

4 In the **Open** dialog box, set the path to the folder containing the toolbar (e.g. `<dvd>\programs\Allplan BCM\Service\AddOn\CadObjekt`) and select the `*.art` file.

5 Click **Import**.

6 In the **Configure office toolbars** dialog box, activate the **Current** check box.

7 Click **Close**.

8 Click **Yes** to confirm the prompt.

The toolbar is added to the list of available toolbars.

Export/Back up and Restore Reports

To export/back up a report

1 Open or activate the data sheet with which the relevant report is associated.

2 Click **Print** on the **File** menu and select **No** if asked if you want to recalculate everything.

The **Print** dialog box appears.

3 Choose a report edition in the **Report templates** list box and select the report you want to use.

4 Click **Export** on the **Edit** menu.

5 Select the target directory you want to use for archiving in the **Browse for folder** dialog box.

6 Click **OK**.

To restore a report from backup files

1 Click **Print** on the **File** menu.

The **Print** dialog box appears.

2 In the **Report templates** list box, select the report edition into which you want to import the reports.

3 Click **Import** on the **Edit** menu.

4 Select the directory containing the reports to be imported in the **Browse for folder** dialog box and click **OK**.

The **Import reports** dialog box appears.

5 In the **Group** list box, choose the report group into which you want to import the reports.

6 Select the report(s) in the **Import reports** dialog box.

7 Click **OK**.

Note: You can also restore the original standard reports provided by Allplan Quantities. How this is done is described in detail in the section entitled ”Restore Standard Reports”.

Index

C

D

E

F

G

N

O

P

Q

R

S

T

W