

Allplan 2006 Manual

Installation, Basics

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Contents

Welcome	1
Introduction.....	2
Sources of Information	2
Documentation for Allplan 2006.....	2
Additional Help	4
Training, Coaching and Project Support.....	5
Installation	7
Installation Documentation	7
Requirements.....	8
Preliminary Considerations Prior to Installing.....	10
Preliminary Considerations	10
First-time Installation on a Standalone Workstation	12
First-time Network Installation	14
Managing Licenses Using NemSLock	15
Generating a registration request.....	15
Registering a license file.....	16
Basics.....	19
User Interface	20
Toolbars.....	21
Shortcut menu.....	25
Dialog line	26
Status bar	26
Orientation in the Program – The Modules.....	27
Data in Allplan	29
Projects, filesets, drawing files/documents and layers.....	30
Understanding drawing files.....	31
Filesets	33
Working with NDW and NPL files in Allplan	34

Using Layers	38
Understanding layers	38
Defining the layer on which to design	38
Setting the format properties of layers	39
Layer access rights	40
Setting layer visibility	41
Managing layers and layer structures	42
Advantages of organizing data using layers	42
Relationship between layers and drawing files	43
Layer hierarchy	44
Using design groups	45
Using layer sets	46
Managing Data With ProjectPilot	47
ProjectPilot's user interface	48
Common approaches in ProjectPilot	49
Using the Mouse	53
Table 1: no tool is activated	53
Table 2: a drafting tool is activated (e.g. for drawing a line)	55
Table 3: an edit tool is activated (e.g. for deleting)	56
Controlling the Display on Screen	57
Display Sequence	59
Sequence in which elements are displayed on screen	59
The 'Sequence' element property	60
Modifying the display sequence	61
Activating and Quitting Tools	62
Activating tools	62
Executing tools	62
Quitting tools	62
The Wizard	63
Correcting Errors	64
Saving Your Work	65
Saving NDW-format files	65
Saving drawing files	65
Defining Pen Thickness, Linetype and Line Color	67
Modifying Pen Thickness, Linetype and Line Color	68

Using the Clipboard.....	69
Using OLE Objects	71
Linking and embedding OLE objects	71
Linking and embedding bitmaps as OLE objects.....	72
Transparency of OLE objects.....	73
Editing OLE objects.....	73
Using XRefs	74
Editing XRefs.....	75
Restrictions on the use of XRefs.....	75
Comparison between normal and advanced XRefs.....	76
Selecting Elements, Overview.....	77
Selecting elements by entering a region.....	78
Selecting and editing elements using handles.....	79
Snapping and Entering Points.....	82
Dialog line	82
Entering length values and coordinates.....	85
Displaying coordinates	87
Point snap	87
Using CursorTips.....	91
Tools and options provided on the shortcut menu and in the dialog line	92
Tools and options provided on the shortcut menu.....	92
Tools and options in the dialog line.....	93
Setting a cursor snap angle and using drawing aids	96
Using the bracket feature	97
Entering points relative to existing points.....	97
Customizing options.....	98
Polyline entry tools.....	100
Using Track Lines.....	101
Available track points and track lines.....	101
Entering length values when working with track lines.....	105
Customizing track lines.....	106
Applying Surface Elements	107
Hatching, pattern, fill, bitmap area	107
Hatching and Reference Scale	109
'Same as in plan' hatching setting.....	110
'Scale-based adjustment in plan' hatching setting.....	111

Pattern and Reference Scale	112
'Constant as in layout' pattern setting.....	113
'Scale-based adjustment in plan' pattern setting	114
Working Efficiently Using Libraries, Favorites and Defaults.....	115
Default settings.....	115
Saving components as favorites.....	116
Using symbols.....	117
Using smart symbols	118
Paths in Allplan 2006	122
Data Exchange with Other Programs.....	123
File types.....	124
The conversion process – important steps.....	125
Importing files with large coordinates.....	126
Adjusting data	128
Adjusting units.....	129
Using assignments.....	131
Using configuration files.....	132
Exporting bitmaps and scanned images	132
Editing imported data	134
General information on exporting layouts.....	135
Printing and Plotting	137
Requirements.....	137
Printing the contents of the display – print preview	137
Print preview tools.....	138
Print preview options	139
Assembling and printing out layouts.....	144
Nemetschek drivers and Windows drivers.....	144
Components of a layout.....	148
Sequence in which elements print.....	149
Printing color layouts.....	151
Printing to file.....	152
Using plot profiles.....	153

Appendix.....	155
Overview of Tools.....	155
Viewports.....	155
The Height dialog box.....	156
The main flyout toolbars	157
Index.....	159

Welcome

Welcome to Allplan 2006, the powerful CAD program for architects and civil engineers.

In this manual you will familiarize yourself with the user interface and the basic tools provided in Allplan 2006.

This way, you will quickly learn how to use Allplan 2006, and you will find that within a short time you will be in a position to carry out common operations with ease in order to accomplish your daily tasks.

This chapter covers the following:

- An overview of the contents of this manual
- Documentation for Allplan 2006
- Additional help on Allplan 2006
- Where to turn for training, coaching and project support

Introduction

This manual consists of two sections:


- Documentation on installing Allplan 2006
- An introduction to basic concepts and navigation

This manual also assumes that you have a working knowledge of Microsoft® Windows® programs. Following this manual will provide both the experienced CAD user as well as newcomers to CAD with a solid foundation in the methods and approach employed by Allplan 2006.

Sources of Information

Documentation for Allplan 2006

The Allplan 2006 documentation consists of the following:

- The **online Help** is the main source of information for learning about and working with Allplan 2006. While you work with Allplan 2006, you can get help on the current function by pressing the F1 key, or activate  **What's This** on the **Standard** toolbar and point to the icon on which you require help.
- The **Manual** consists of two parts. The first section shows you how to install Allplan 2006. The second section provides an overview of basic concepts and terms as well as methods for entering data in Allplan 2006.
- The **Architecture Tutorial** guides you step by step through the process of designing a building. In addition, you learn how to analyze and evaluate the building data using lists and schedules and to output the results to a plotter.

- The **Engineering Tutorial** guides you step by step through the process of creating key plans, shell and formwork drawings as well as reinforcement drawings - from simple 2D drawings to fully automatic reinforcement drawings managed in three-dimensional space.
- The brochure **New Features in Allplan 2006** provides information on what's new in the latest version.
- Each volume in the **Step-by-Step** series deals with a specific concept or series of tools/modules in Allplan 2006 in detail. The areas covered include data management, system administration, geodesy modules, presentation tools, 3D modeling etc. These guides can also be obtained from the Nemetschek training department:

Nemetschek Deutschland GmbH
Campus Center Munich
Konrad-Zuse-Platz 1
81829 Munich
Germany

Phone: (0 18 01) 75 00 00

Fax: (0 18 01) 75 00 01

Additional Help

Tips for efficient usage

The **Help** menu provides the **Tips for efficient usage** item. This topic includes practical tips and tricks on navigation and usage.

User board

Nemetschek's Serviceplus Portal includes an extensive user board enabling thousands of users to exchange information on all questions pertaining to Nemetschek products. Register now:
<http://serviceplus.nemetschek.de>

LineLetter

The LineLetter is a publication that appears several times a year. It is sent in digital form free of charge to Serviceplus customers. The LineLetter includes practical tips and tricks on all program areas.

FAQs on the Internet

Up-to-date FAQ's are available on the Internet at the following address:

<http://www.serviceplus.nemetschek.de/faq>

Note: You can also get this address right from the program. On the **Help** menu, point to **Nemetschek on the Web** and click **FAQ**.

Feedback on the Help

If you have suggestions or questions on the online Help, or if you come across an error, send an e-mail to:

Dokumentation@nemetschek.de

Note: You can also get this address right from the online Help. To do this, go to the **Allplan** menu and click **Help Feedback**.

Training, Coaching and Project Support

The type of training you are given is a decisive factor in the amount of time you actually spend working on your own projects: A professional introduction to the programs and advanced seminars for advanced users can save you up to 35% of your editing time!

A tailor-made training strategy is essential. Nemetschek's seminar centers offer an extensive range of programs and are happy to work out a custom solution with you that will address your own needs and requirements:

- Our **sophisticated, comprehensive seminar program** is the quickest way for professional users to learn how to use the new system.
- **Special seminars** are designed for users who wish to extend and optimize their knowledge.
- **One-on-one seminars** are best when it comes to addressing your own particular methods of working.
- **One-day crash courses**, designed for office heads, convey the essentials in a compact format.
- We are also happy to hold seminars on your premises: These encompass not only Allplan 2006 issues but include analysis and optimization of processes and project organization.

The up-to-date seminar guide is available on the Internet:

www.nemetschek.de/campus

For more detailed information on the current training program, please contact the Nemetschek Campus in Munich:

Phone: (0 18 01) 75 00 00

Fax: (0 18 01) 75 00 01

A request:

We are always trying to improve the overall quality of our program documentation. Your comments and suggestions are important to us and we welcome feedback on the manuals and on-line help.

Please do not hesitate to contact us to express criticism or praise concerning the documentation. Feel free to contact us as follows:

Documentation

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Installation

Installation Documentation

Documentation of installing Allplan 2006 can be found in a number of places:

- The manual describes the procedure for a first-time installation at a standalone workstation and covers the essentials for first-time installation in a network.
- The Allplan 2006 CD contains the `install.hlp` file, which provides additional, up-to-date and detailed information on installing and upgrading (standalone workstations and networks). We strongly recommend that you read this file before installing.

Requirements

Hardware requirements

The following table lists the minimum requirements for running Allplan 2006:

Minimum setup

- Intel® Pentium® III or compatible
Note: The processor must be equipped with SSE. You can download a tool which you can use to check whether the processor you use meets these requirements from <http://www.nemetschek.de/info/sys2006>.
- Processor with a rate of at least 1GHz
- 512 MB RAM (256 MB without display list)
- 1 GB free hard disk space +400 MB on the system drive
- CD-ROM drive (for the installation)
- When you are using a hardlock:
1 parallel or USB port
- Graphics board, 32 MB, resolution 1024 x 768
- 19-inch monitor 1024 x 768
- Network card (only for network operation)
- 3-button mouse
- Floppy disk drive, connection to network or email (for installing the license)

Software requirements

- Allplan 2006 runs on the following operating systems:
 - Windows XP Professional / Home, Service Pack 2
 - Windows 2000, Service Pack 4
 - Windows Server 2003, Service Pack 1
- In addition to the operating systems mentioned above, Allplan 2006 file servers run on the following operating systems:
 - Novell NetWare 6.5 with NetWare Services
 - Suse Linux 9.1 with Samba server 3.0 based on Reiser file system

Important: Please check that all workstations are running one of these operating systems.

Notes:

- For professional performance, we recommend Windows XP Professional or Windows 2000. Other operating systems such as Linux, HP-UX or Macintosh have not been tested by us. Please bear in mind that Allplan 2006 does not run on these operating systems (the same applies for file servers). We do not provide any support for these types of installations.
- Internet Explorer 4.01 or higher

Further requirements

The following notes are particularly interesting when you have installed a new operating system (e.g. Windows XP).

- The operating system must already be installed and running.
- The hardware and software requirements mentioned above also apply to computers which serve as data servers for an Allplan 2006 installation.
- All peripheral devices must be connected and correctly configured.
- When you install two or more Allplan 2006 workstations in a network, it is essential that these workstations are networked correctly.

- When upgrading in a network, you need to install Allplan 2006 on all the networked workstations before you can resume your work.

Please note the following:

- You can only install Allplan 2006 when you have a valid Serviceplus contract - and thus a license file - for the workstation in question.
 - You cannot use this version together with earlier Allplan versions or data thereof!
- Every user must have full access to the Allplan folders; read access is not sufficient.

Preliminary Considerations Prior to Installing

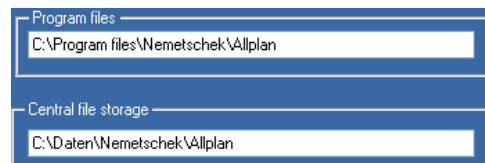
Preliminary Considerations

Allplan 2006 data can be classified as follows:

- **Program files:** these files are always installed locally on every workstation.
- **Central file storage:** projects and office standard, for example. This data can be installed locally or on a file server.

Prior to installing, decide on the folder in which you want the program to be installed as this can only be altered later by uninstalling and re-installing.

It is a good idea to keep the data files and program files in separate, central locations. This will facilitate backup operations later. An example:



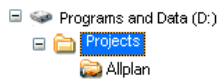
Central file storage when installing in a network

When installing in a network, the folder for the central file storage or the drive where this folder resides must be shared for all the workstations on which Allplan 2006 is to be installed.

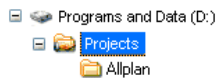
This also applies when installing with Workgroup Manager when the central file storage is located on the workstation to be installed. In this case, too, the central file storage must be in a folder under a share.

Example:

You want to use the **Allplan** folder for the central file storage.



The **Allplan** folder is shared. When installing with Workgroup Manager, you **cannot** use this folder as the central file storage as the folder is not located under a share.



The **Projects** folder is shared. When installing with Workgroup Manager, you **can** use this folder as the central file storage as the **Allplan** folder is located under a share.

Note: To find out how to share folders or drives, please consult the online Help system for the operating system you are running.

First-time Installation on a Standalone Workstation

This section describes the procedure for a first-time installation of Allplan 2006 at a standalone workstation. Existing Allplan versions (V2005 or earlier) are not affected.

To install a standalone version of Allplan 2006

➤ Read the following before installing:

- Requirements for installing and running Allplan 2006
- Preliminary considerations

- 1 Close any applications that are running, shutdown the computer and turn it off.
- 2 Turn on all the peripheral devices.
- 3 Turn on the computer and boot.
- 4 Log on as Administrator for the local machine or as a user with administrator privileges.
- 5 Insert the **Allplan 2006** CD in the CD-ROM drive.

Setup should start automatically. If it doesn't, click **Start** on the task bar, select **Run** and enter the drive letter of the CD-ROM drive followed by the pathname and **setup**. Geben Sie zum Beispiel **e:\setup** ein.

- 6 Select a language for Setup and press **OK** to confirm.
- 7 Press **Next** to acknowledge the Welcome screen.
- 8 The terms of the software license agreement are displayed in the **Software License Agreement** dialog box. If you agree to the terms of the agreement, click **Yes**.
- 9 The **Important Information** dialog box provides information on the documentation of installing Allplan. Press **F1** to read it. Otherwise, click **Next**.

- 10 Enter your user name and company name and click Next.
- 11 In the **Installation Options** dialog box, select **First-time installation** or **First-time installation with data transfer**. Then click **Next**.
- 12 If you selected the **First-time installation with data transfer** option: select the data you want to transfer to the new version and click **Next**.
- 13 If you want to install a **time-limited Trial version**, select the **Trial license for temporary use only** option in the **Select License Information** dialog box.

With valid ServicePlus agreement: select **Existing license file** in the **License** dialog box.

If you have purchased a new license for this workstation and this version or if you have purchased new modules with a new license file, select the new license file.

Then click **Next**.

- 14 Select the drive where the Allplan programs and files are to be installed.

Program folder: this is where the program files are installed.

Central file storage folder: this is where the data files (e.g., projects, office standard) are stored.

- 15 In the **Setup Type** dialog box select the desired mode. Then click **Next**.

Typical: installs all the common options. This is the recommended setting.

Compact: only installs the essential program and files.

Custom: installs the files you specify. By default, all components are enabled. Deactivate the component(s) you do not want to install in the **Select Components** dialog box.

- 16 In the **Select Program Folder** dialog box, specify the program folder where the symbols for Allplan 2006 are to be installed.

- 17 Check the settings in the **Start Copying** dialog box. If the settings are OK, click **Next** to start the installation.
 - 18 It can happen that you will now be prompted to restart the computer. Log on as **Administrator** for the local machine or as a user with administrator privileges again.
-

First-time Network Installation

- Before you install the program, please read the \Helpfiles\English\install.hlp file on the Allplan 2006 CD and the chapter “Requirements for Running Allplan 2006”.
- The folder for the central file storage or the drive where this folder is located must be shared for all the workstations on which Allplan 2006 is to be installed.
This also applies when installing with Workgroup Manager when the central file storage is located on the workstation to be installed. In this case, too, the central file storage must be in a folder under a share.
- Select the same folder for all workstations. This folder will serve as the central file storage and will ensure that all workstations have access to the same data.
- If you are using Workgroup Manager, it must be installed on all the workstations in the network. It is not possible to have some workstations with Workgroup Manager and some without.

To install for the first time in a network

- 1 Install Allplan 2006 on all workstations as described in “First-time Installation on a Standalone Workstation”.
 - 2 Check every workstation to see whether Allplan 2006 starts correctly.
-

Managing Licenses Using NemSLock

You have installed Allplan 2006 for the first time using a demo license limited in time or a trial license for temporary use supplied with Allplan 2006. This trial license has been customized for your needs and includes the scope of modules you have purchased.

In both cases, the NemSLock License Manager is used: normally, you can work with Allplan for 30 days. During this period, you can use the full range of functions without restrictions., and you can decide if you want to register by requesting a final license for the configuration you have purchased. This ensures that you can start working with Allplan immediately after you have purchased and installed it.

To use the program permanently, please do the following:

Tip: Advanced information on the Nemetschek NemSLock License Manager can be found in the online Help.

- Generate a registration request and send it to Nemetschek, preferably by email.

You will receive the final license promptly (usually by email).

- Register the license file.

The process of registering will only take a couple of minutes.

Generating a registration request

In order to register Allplan, you need to provide Nemetschek with information on your office and computer. Based on this data, Nemetschek will then generate an appropriate license.

Note: When you switch from a demo version to a version that is not limited in time, you need to enter the client ID and the CD key you have received together with Allplan.

To generate a registration request

- 1 Start the Nemetschek License Manager by clicking **Start → (All) Programs → Nemetschek → Nemetschek SoftLock 2006 → License Manager**.
- 2 Check **Apply for registration** in the **Options** area at bottom left in the dialog box.

3 Click **Apply**.

The **Generate Registration Request** dialog box appears.

4 Click **Customer details** and check and, if necessary, update the data displayed in the **Customer Details** dialog box.

5 Click **Create**.

The registration request is created and saved. The path is displayed near the bottom of the dialog box.

6 If you want, you can now check the contents of the registration file by clicking **Open**.

7 Click **Send file**.

The standard email program installed on your computer opens. The registration file is automatically attached to the email.

8 Send the email to the following address:
register@nemetschek.de

9 Click **Exit** to close the Nemetschek License Manager.

After you have been given a license file, you can install it using Register license file.

Registering a license file

Based on the data you have entered in the registration request and the configuration you have purchased, Nemetschek creates a license file. You need to install this license file in order to deactivate the time limit.

To register a license file

☛ You have been given a license file, which you have saved in a local/network folder.

1 Start the Nemetschek License Manager by clicking **Start → (All) Programs → Nemetschek → Nemetschek SoftLock 2006 → License Manager**.

2 Check **Register license file** in the **Options** area at bottom left in the dialog box.

3 Click **Apply**.

The License File dialog box appears.

- 4 Click **Browse...** to navigate to the license file.
- 5 Click **Register license**.

The Register Now dialog box appears. All the program modules that are added to your current configuration are listed in this dialog box.

- 6 Click **OK**.

The Nemetschek License Manager is displayed again. Now you can check the effects of the license you have installed.

- 7 Click **Exit** to close the Nemetschek License Manager.
-

Basics

This section provides information on navigating **Allplan 2006** and the basic structure of the program.

This chapter covers the following:

- The user interface
- The modular structure of **Allplan 2006**
- Managing data in Allplan using NDW-format files or projects, drawing files, filesets and layers.
- Managing data with ProjectPilot
- Mouse button assignments
- Activating and quitting tools
- Using the Wizard
- Using the shortcut menus
- Correcting errors
- Saving your work
- Defining and changing format properties
- Using the Clipboard
- OLE objects and XRefs
- Selecting elements
- Snapping and entering points
- Entering polylines and areas
- Applying hatching, pattern or fill to areas
- Working efficiently using default settings, symbols and smart symbols
- Exchanging data with other programs
- Printing and plotting

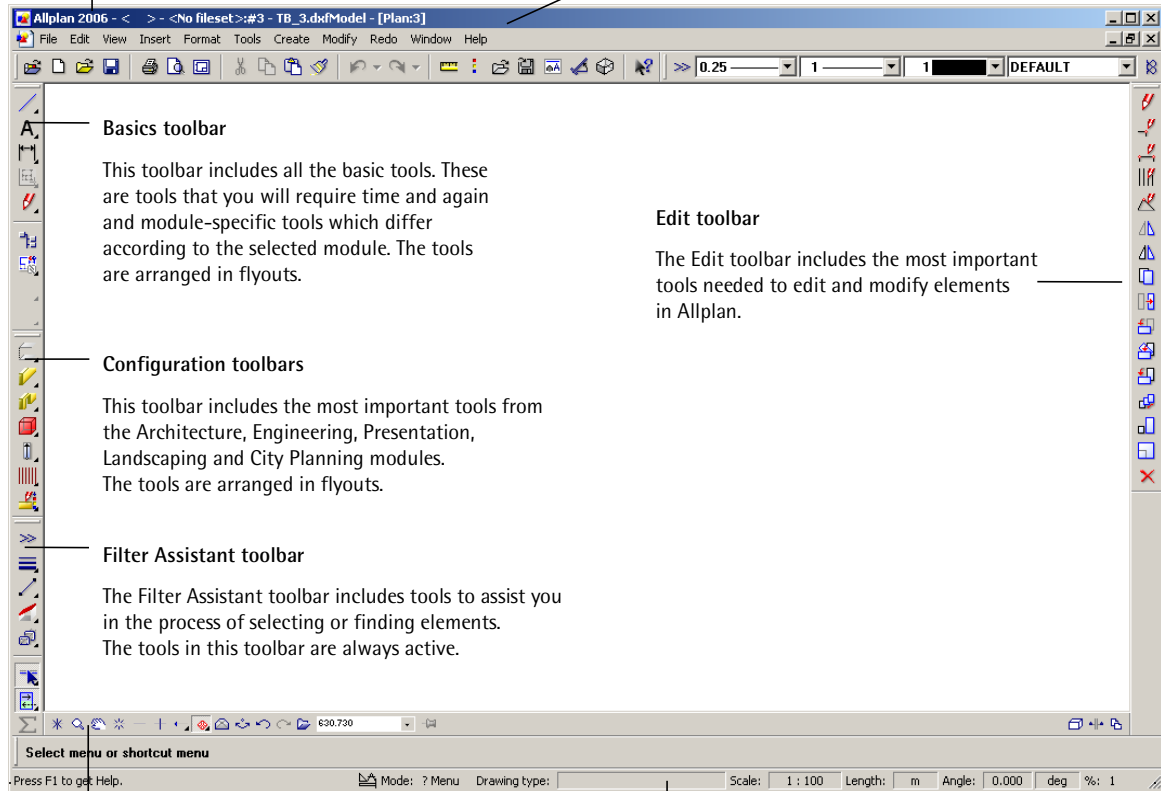
User Interface

Title bar

The title bar of Allplan's application window shows the current project, current fileset and current drawing file.

Menu bar

All the tools found in the toolbars can be activated via the menus.



Basics toolbar

This toolbar includes all the basic tools. These are tools that you will require time and again and module-specific tools which differ according to the selected module. The tools are arranged in flyouts.

Configuration toolbars

This toolbar includes the most important tools from the Architecture, Engineering, Presentation, Landscaping and City Planning modules. The tools are arranged in flyouts.

Filter Assistant toolbar

The Filter Assistant toolbar includes tools to assist you in the process of selecting or finding elements. The tools in this toolbar are always active.

Edit toolbar

The Edit toolbar includes the most important tools needed to edit and modify elements in Allplan.

Tools in the viewport

The border at the bottom of each viewport includes several buttons you can use to control the on-screen display.

Status bar

Various types of information on the current drawing are displayed here – e.g. the reference scale and unit of length.

Toolbars

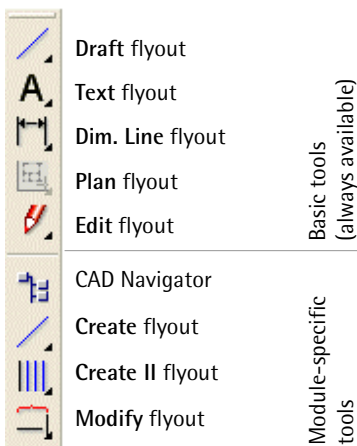
Toolbars contain icons that you can use to execute functions. Positioning the cursor over an icon displays a ToolTip with a short description of the function.



Toolbars can be arranged around the edge of the workspace (this is the default) or made to float anywhere on your screen. To float a toolbar, click the top border of the toolbar or its edge, press and hold down the left mouse button, and drag the toolbar into the workspace.

You can use Fix Toolbars on the View menu to protect the toolbars from being moved inadvertently.

Basic Tools toolbar



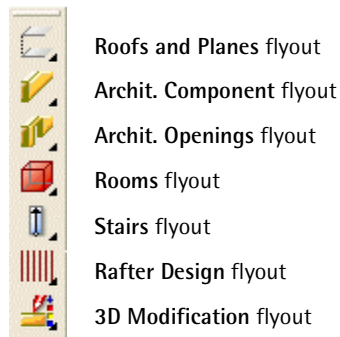
The top half of the **Basic Tools** toolbar includes all the important tools. These are tools that you will require time and again – for example, drafting, text, dimensioning and edit tools. These tools are always available in the same configuration in all the modules. The bottom half includes the tool for accessing the CAD Navigator as well as module-specific tools in the Create, Create II and Modify flyouts. The contents of these tools change with the module you

select. (The illustration shows the contents of the flyouts for the Draft module.)

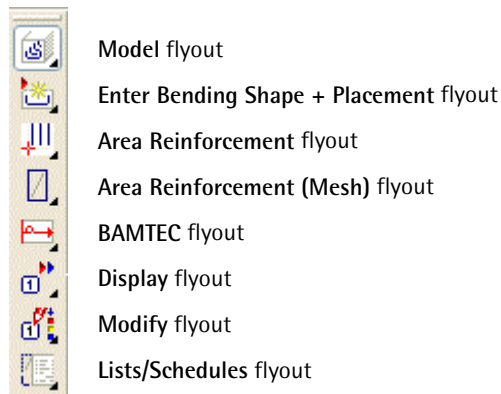
Note: An empty icon is displayed when the **Create II** or **Modify** flyouts do not contain any tools .

Configuration toolbars

Architecture configuration



Engineering configuration

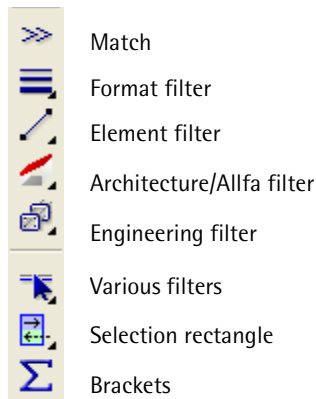


Allplan 2006 offers several default configurations. Access to the most important tools for a specific discipline is provided in each of these configurations. To select a default configuration, click the **View** menu, point to **Default Configurations** and select a configuration. The relevant configuration toolbar is displayed depending on the

configuration you have selected (the examples here show the **Architecture** and **Construction Engineering** toolbars). These contain the most important tools for daily work. You can thus carry out design tasks without having to switch between modules.

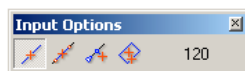
Filter Assistant toolbar

The **Filter Assistant** toolbar includes tools to assist you in the process of selecting and finding elements. The tools in the **Filter Assistant** are always active.



Input options

The **Input options** appear when a function offers several implementation options. Below is the **Input options** toolbar for the polyline entry tools. This toolbar appears when you activate the Hatching tool, for example. After selecting this tool, you can choose from the various data entry options presented on the **Input Options** toolbar.

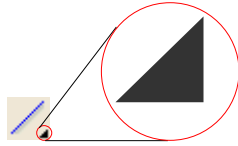


The functions on the **Input Options** toolbar can be displayed as a separate, free-floating toolbar.

Flyouts

Icons with a small black triangle contain what are known as flyouts. Flyouts contain additional related tools.

Tip: If you click the icon, it takes some time until the flyout is opened. If you click the black triangle directly, the flyout opens immediately.



To open a flyout, click an icon with a black triangle and press and hold down the mouse button. To select a tool, keep the mouse button pressed down and position the cursor over the relevant tool. Then release the mouse button.

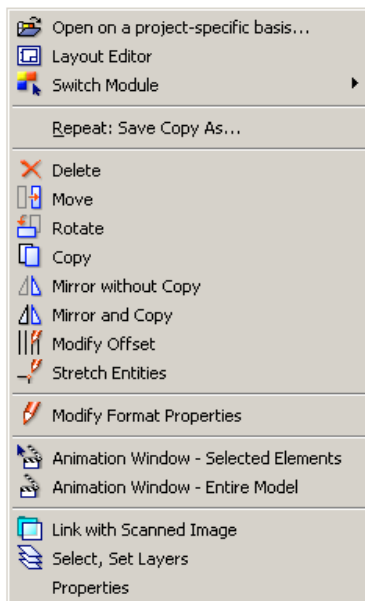
Note: When a flyout is closed, the icon for the tool that you activated last is displayed. This way, you can activate the same tool several times in succession without having to open the flyout each time.



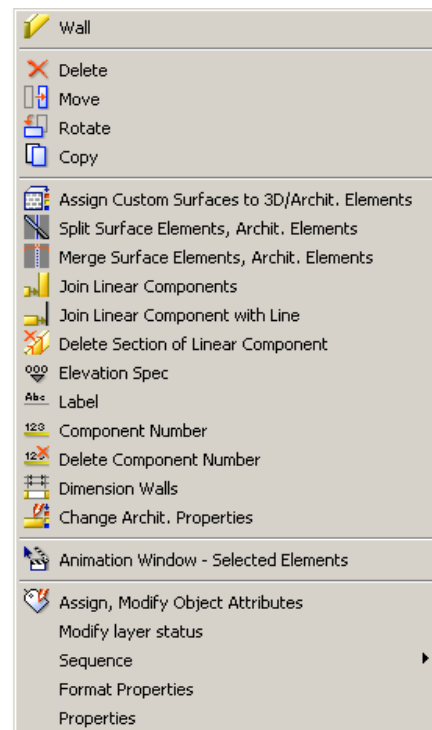
Shortcut menu

The shortcut menu is displayed at the position where the cursor is located when you right-click an element or in the workspace.

- When you click elements with the right mouse button, edit tools appropriate to the tool in question are presented. Double-click an element with the right mouse button. The tool by means of which the element was created is activated and all the settings are copied.
- If you click in the workspace with the right mouse button, several tools which are needed frequently are presented. You can also switch to the layout editor and toggle between modules.





Shortcut menu when clicking in the workspace

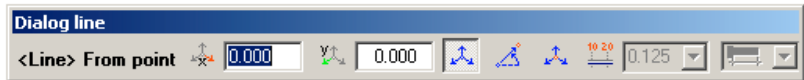


Shortcut menu when clicking a wall

Dialog line

The dialog line below the workspace is where the program prompts you to enter values. Alternatives are separated by slashes.

Note: You can perform calculations in the dialog line and you can transfer the results of measurement operations carried out with  **Measure & Compute** as well as results directly from the  **Calculator**. You can also use CTRL+C and CTRL+V to copy/paste text to/in the dialog line.



Status bar

The status bar is the bottom line in the Allplan 2006 application window. Various types of information on the current drawing file are displayed here – e.g., the reference scale and unit of length. You can also modify these values by clicking them.


Note: When the **Input Options in Status Bar** option is active (on the **View – Toolbars** menu), the Input options are displayed on the right in the status bar.

Orientation in the Program – The Modules

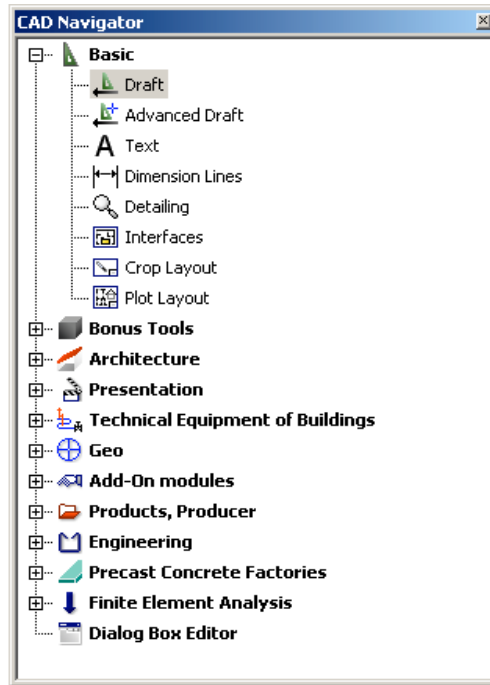
Allplan 2006 has a modular structure. In other words, it features individual program modules, each of which contains the necessary tools for a specific discipline. The most important tools are always at hand on the **Basic Tools** toolbar, the **Configuration** toolbars and on the menus. This way, access to the most frequently used tools is provided without requiring you to switch to a different module. The modules themselves are arranged in families: Basic family, Bonus Tools family, etc.


To switch between the modules, the following three options are available:

- Click in the workspace with the right mouse button and select the desired module in the **Switch module** field on the Shortcut menu.

Tip: When you have enabled the **Auto-select module (also when selecting the first line of the shortcut menu)** option in the  **Global Options**, **Miscellaneous** tab, the program automatically switches to the appropriate module when you create elements using the shortcut menu.

- Use **Tools- Customize** to insert icons from the **Switch Module** category in a toolbar or to define shortcut keys. This is the quickest way to switch to frequently used modules.
- Click on the module you want to switch to in the CAD Navigator. This also clearly shows the structure of the individual modules.



Note: You cannot use the CAD Navigator to switch to the Plot Layout module. Use the  Layout Editor tool instead.

Data in Allplan

Two different Allplan 2006 packages are available. The function scope and the manner in which data is managed depends on the Allplan 2006 edition you are using:

- **Document-based editions:**
You are working with Nemetschek drawing documents what are known as NDW-format files. You can use folders to structure and manage the data in Windows Explorer.
- **Project-based packages:**
You are working with drawing files, which are structured using projects and filesets. Drawing files can be open in edit or reference mode. Drawing files are also NDW-format files. But as opposed to the document-based editions, they are saved in the corresponding project and managed in Allplan 2006.
- In addition, you can use layers to organize data in all Allplan 2006 editions/packages.

The section that follows provides an overview of the different approaches for managing data in Allplan.

Projects, filesets, drawing files/documents and layers

When you work in a project-based manner, a new project is created for each construction project (a project is an organizational unit). Technically, a project is a folder; metaphorically speaking, it is a drawer containing the drawing files. An unnamed **private project** for practice and testing is available to each user.

Filesets are an important organizational unit within projects. A fileset can consist of up to 128 drawing files. You can assign any drawing file to a fileset. Up to 1,000 filesets can be created per project. A fileset can be placed in a layout to be printed with a single command.

The actual design and data creation process happens in drawing files. These are the equivalent of the transparencies used in conventional building design. Drawing files can be used to give projects a structure. In IT terms, a drawing file is a conventional file stored on your hard disk. You can display and edit up to 60 drawing files at once - in other words, you can have several files open simultaneously. A project can contain up to 6000 drawing files. When working without layers, the individual building elements (such as walls, stairs, labeling, etc.) are drawn on different drawing files and superimposed like transparencies.

Layers provide an additional means of applying a structure - within documents. They apply to all the drawing files in a project. Design entities and components can automatically be assigned the correct layer. Layers can be set so that they are not visible to the user.

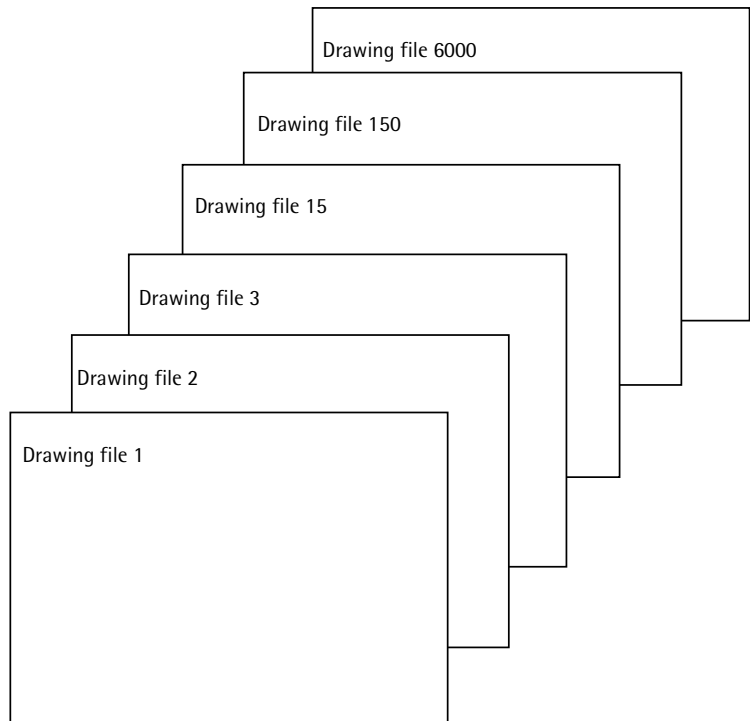
A layout is the unit you send to the printer or plotter. As opposed to design using a conventional drafting board, the scope of the layout does not have to be defined in advance. Generally, you leave the layout (which involves arranging and laying out drawing files and/or filesets) until you're finished with the design. Each project can contain up to 3000 layouts.

Note: You can also work on a document-oriented basis in Allplan; in other words, you do not need to structure the individual documents (drawing files) in projects. The Allplan documents can be located - independently of projects - in any folder.

Understanding drawing files

➤ Only available when working in a project-based manner

In Allplan 2006, the actual design and data creation process happens in *drawing files*. These are the equivalent of the transparencies used in conventional building design. Drawing files can be used to give projects a structure. In IT terms, a drawing file is a conventional file stored on your hard disk. You can display and edit up to 60 drawing files at once - in other words, you can have several files open simultaneously. A project can contain up to 6000 drawing files. When working without layers, the individual building elements (such as walls, stairs, labeling, etc.) are drawn on different drawing files and superimposed like transparencies.



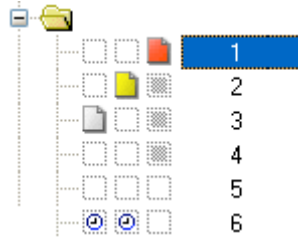
In order to edit the drawing files, they have to be activated (opened). This is done in the **Open on a project-specific basis: files and filesets** dialog box.


Drawing file status

➔ Only available when working in a project-based manner

With the drawing file status, you define the drawing file on which you draw and which drawing files are visible and/or can be modified.

The following illustration shows the different drawing file statuses. An explanation is provided in the table below.



Number	Drawing file status	Remark
1	Active drawing file	The active drawing file is the one on which you draw. There must always be one active drawing file.
2	Drawing file open in edit mode	Elements in edit mode drawing files are visible and can be modified. You can open up to 60 drawing files in edit and/or reference mode.
3	Drawing file open in reference mode	Elements in drawing files that are open in reference mode are visible, but cannot be modified. In the  Global Options, you can configure the program to display all the elements in reference drawing files using a single color. Empty drawing files cannot be opened in reference mode.
4	Inactive	Elements on inactive drawing files are not visible.
5	Empty drawing file	Empty drawing files have no data type icon.
6	Drawing file assigned temporarily	Drawing files can temporarily be assigned to filesets; this assignment is cleared when you switch to a different fileset.

Note: When working on a document-oriented basis, you cannot open documents in edit or reference mode. But you can use the NDW-XRef tool (Insert menu) instead. Set the placing mode to **advanced**, enable the **Retain coordinates** option and place the XRef.


Filesets

➤ Only available when working in a project-based manner


A fileset is a compilation of drawing files. For example, all the drawing files in a story can be combined into one fileset. A fileset can contain up to 128 drawing files. A drawing file can also belong to several filesets.

This way, whenever you want to view or edit the data for a floor, you only have to open the relevant fileset.

To create new filesets


- 1 Click  Open on a project-specific basis.

Tip: You can also double click with the left mouse button in the workspace.

- 2 Click  Create Fileset.
- 3 Click the number under which you want to create the new fileset. The program will propose the lowest available number.
- 4 Enter a name for the new fileset and click OK.

You can enter up to 70 characters for the name.

To assign drawing files to a fileset

- 1 Click  Open on a project-specific basis.


Tip: You can also double click with the left mouse button in the workspace.

- 2 On the right in the dialog box, select the drawing files you want to assign to the fileset.
- 3 Assign the drawing files to a fileset in one of the following ways:
 - Drag & drop the selected drawing files onto the relevant fileset. If you want to assign the drawing files temporarily, keep the SHIFT key pressed down.
 - Click the selection with the right mouse button and, on the shortcut menu that appears, click **Assign to Current Fileset**.

Note: You can also move or copy drawing files from a different fileset.

Note: Another method for copying and moving drawing files between filesets is provided by the **ProjectPilot**. Here, you can also create filesets in projects other than the current one.


Working with NDW and NPL files in Allplan

Tip: It is advisable to reset the color in the  **Global Options, View** tab, so that you can differentiate the drawing files and layouts from the NDW files and NPL files on screen when you are working in a project-based manner.


Allplan documents can be saved in and opened from any path, regardless of projects. These documents are known as NDW-format files and NPL-format files.

This option provides a convenient way of quickly sending documents to partner offices or opening a drawing file or layout from a different project.

Properties of NDW files

NDW-format files are always opened and displayed in a separate window. You can use the  **New Viewport** tool to display a NDW file in multiple viewports and in any projection. You can move and copy elements between NDW-format files and drawing files (for more information, please consult the online Help; see the section entitled “Exchanging elements between drawing files and NDW files”). Allplan 2006 documents cannot be open as NDW files and as drawing files (not in reference mode either) at the same time.

You can enter any names for NDW-format files and save these files in any folder (as opposed to drawing files that are always given names consisting of `tb00???? .ndw` (???? = drawing file number) and that are always saved in the project folder).


You can use  **NDW Layout Element** to place NDW-format files in layouts.

All the resources belonging to a NDW-format file are saved together with this document. The advantage of this is that documents always have a uniform appearance, regardless how the current project or office resources are defined.

Properties of NPL files

NPL is the abbreviation for Nemetschek PAn File. You can place layout elements in a NPL file and then set up layouts using these elements. You can enter any names for NPL-format files and save these files in any folder (as opposed to layouts that are always given names consisting of pb00???? .npl (???? = layout number) and that are always saved in the project folder).

Only one layout can be open at any one time. As soon as you open a new layout or NPL-format file, the original file is closed. The window in which a NPL-format file is displayed is always maximized.

Layout elements can only be placed in NPL-format files using the  NDW Layout Element tool. Please note that you cannot use drawing files.

In contrast to NDW files, NPL-format files always use the office standard's resources.


Restrictions on the use of NDW files


When using NDW files in the current Allplan 2006 version, be sure to note the following:

- Unlike drawing files, NDW-format files cannot be managed in filesets or projects. They are always opened as individual documents in a separate window. It is therefore not possible to place NDW-files in the background and use them as a backdrop for your work.
- When you have licensed a module in the Precast Concrete Factories family, the functions for opening and saving NDW-format files are not displayed.
- NDW-format files are not available in the FEA and Precast Concrete Factories modules.
- The XRef and Bitmap tools (on the Insert menu), the Link with Scanned Image tool (in the Scan module) as well as Activate Section and Animation Window – Selected Elements are not available for NDW-format files. When you open a drawing file with a XRef as a NDW file, only the frame and the name of the XRef are displayed.
- As long as a NDW-format file is open, the Bitmap tool (on the Insert menu), the Link with Scanned Image tool (in the Scan

module) and all the functions in the FEA family are not available (not for drawing files either!). Before you can select these functions, you have to close all NDW-format files.


Creating new NDW/NPL files

You can use the  New... tool to create new NDW-format files or NPL-format files.

In the case of NDW-format files, you can select a template file. All the resources and elements are then taken from this template file and used in the new file. All you need to do is save a file (containing the desired resources and elements) with the file name `new.ndw` in folder `Std\Template`. Every NDW-format file you create using  New... is then based on this template file.

Saving drawing files as NDW files

Allplan provides several options for saving one or more drawing files as NDW-format files. The options that are actually available to you depend on the license you are using. (See the section entitled “Restrictions on the use of NDW files” in the online Help.)

 Save As ... (File menu)

You can use this tool to save the current drawing file as a NDW file in Allplan 2006 format.

Save Copy As ... (File menu)

You can use this tool to save the current drawing file as a NDW-format file. The following formats are available: 2006, 2005, 2004, 2003, *.nas (Wizard file) or *.sym (symbol file).

Exporting loaded drawing files with resources

You can use this tool to save all the loaded drawing files (the current drawing file and all the files that are open in edit and reference mode) as NDW-format files. A separate NDW file is generated for each drawing file. The names of the drawing files are used for the names of the NDW-format files created and cannot be altered.

Saving layouts as NPL files

Allplan provides several options for saving a layout as a NPL-format file. The options that are actually available to you depend on the license you are using.

Save As ... (File menu)

You can use this tool to save the current layout as a NPL file in Allplan 2006 format.



Exchanging elements between drawing files and NDW files

You can exchange elements between drawing files and NDW-format files in two ways:

Drag & drop

The easiest way to move or copy elements between drawing files and NDW-format files is using drag & drop. All you need to do is select the elements, press and hold down the mouse button and drag the elements into the desired window. To copy the elements, press the CTRL key and the mouse button at the same time.

Clipboard

Copy the elements to the Clipboard and then paste them in the file using  Paste or  Paste to Original Position tool (on the Edit menu).

Using Layers

Understanding layers

Layers provide an additional means of applying a structure - within documents. Metaphorically speaking, a layer is a transparency on which design elements belonging to a specific category (load-bearing walls, non-bearing walls) are drawn. Layers can be set so that they are visible or hidden.


When you work on a project-oriented basis, the use of layers obviates the need for frequent switching between drawing files and they ensure that associative elements - such as wall dimensions or sill elevation labels - reside in the same drawing file and yet can still be hidden from view.

Layers are important organizational elements. Their importance increases the more people are involved in a project and the more a CAD system is used for the specialist design processes. Layers do not replace drawing files. Rather, they complement them.

Defining the layer on which to design

Every element is automatically drawn on a specific layer. The layer on which you draw is based on the tool you use. A line and a wall, for example, are drawn on different layers.

The layer on which you draw is governed by the following settings:

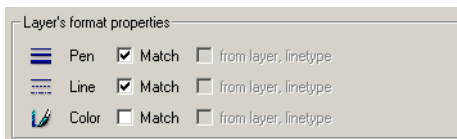
- When you activate a tool (e.g., Line) for the first time, a specific layer is automatically selected as the current layer. The layer in question depends on which tool you activate. This is only possible when the **Auto-select layer with menu** option is activated in the **Layer** dialog box. If this option is disabled, the **Default** layer is always used.
- You can use  **Select Layers** or the **Format** toolbar to define a different layer as the current one. This layer will then automatically be used as the current layer the next time you activate the tool.

- If you save components as styles, the layer you have currently set is also saved. When you retrieve favorite files later, this layer is automatically set as the current layer.
- The sill representation of door and window openings get the layer of the wall in which they are inserted, regardless which layer is currently set.

Setting the format properties of layers

Every layer has **pen**, **line** and **color** properties. In the Layer dialog box, you can specify that an element is to automatically assume the properties of the layer on which it is drawn.

The format properties of a layer can also be defined as a **linestyle** and saved under a name of your choice. Elements can then be assigned the format properties from this layer in a fixed manner.







When defining **linestyles**, you specify whether they change according to the scale or drawing type. You can define different linestyles for various scale ranges and/or drawing types so that the display of elements varies depending on the reference scale / drawing type set. Linestyles enable users to work on a scale-independent basis.

Drawing types define how elements are displayed on screen and in the printout. The display of the elements varies depending on the selected drawing type. Requirements: the format properties are taken from the layer (in a fixed manner) and the use of linestyles is enabled.

Layer access rights

There are different layer access rights. These rights control whether you can see and/or modify layers (and thus the elements assigned to the layers). The access rights are presented by icons in the Layer dialog box, **Select Layer/Visibility** tab:

Icon	Access right	Explanation
	Current	The layer on which you draw.
	Modifiable	Elements in this layer are visible and can be modified.
	Visible, frozen	Elements in this layer are visible but cannot be modified.
	Hidden, frozen	Elements in this layer are not visible and cannot be modified.

The color of the bottom part of the layer icon shows the rights of the current user group (yellow = editing rights, gray = only visible -> cannot be edited).

The color used to display the upper part shows the current visibility status.

In the **Select Layer/Visibility** tab, you can limit access rights to layers and, for example, set the status of **Modifiable** layers to **Visible, frozen**.

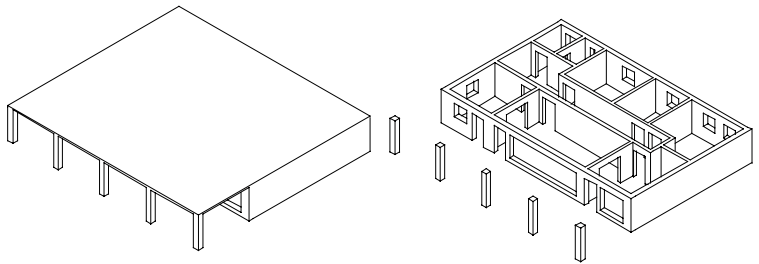
But access rights to layers also depend on the design group to which the relevant user belongs. Design groups are required when several users are working on different levels within the layer hierarchy. This ensures that the layers which serve as the basis for a design are not changed by users unless their design group has the explicit right to do so.

Thus, you cannot assign a higher status (for example, set hidden layers to modifiable) to layers which you are not allowed to access due to the design group you belong.

Setting layer visibility

You can set layers so that they are visible or invisible and thus show/hide the corresponding elements.

This way, you can quickly hide the elements you don't need during the current design phase, selectively modify elements in the displayed layers, check your plan and see whether all the elements are assigned to the desired layer. For example, you might choose to hide the slab layer and then view the spatial arrangement of the building as a hidden line image in perspective view.



If you find that you often require the same combination of visible and hidden layers (for dimensioning or labeling at certain scales, for example), then it is best to define what is known as a layer set. You can also use layer sets when assembling your layout later on so that only the visible layers are printed out.

Tip: Right click an element and select **Modify Layer Status** on the shortcut menu and then click **Isolate Element Layer** to hide all the layers with the exception of the element layer.

Note: To use the same color for elements on frozen layers, enable the check box in the **Display** area of the **Layer** dialog box.

Managing layers and layer structures

The management of layers and layer structures is generally the responsibility of the system administrator. This person defines which layers are used, sets up the design groups and grants access rights. Employees (architects, engineers, etc.) are assigned to the design groups, and thus they are granted the relevant access rights to the individual layers.

Advantages of organizing data using layers

➔ Only available when working in a project-based manner

With large projects in particular, organizing data using layers has significant advantages.

Task-oriented approach

For individual disciplines or design phases like, for example, designing the office arrangement in an administrative building, the same reference drawing files and current drawing file are required for each floor. As you work, you need to switch between the floors frequently.

If you work with layers, you do not need to reassemble the necessary drawing files each time or create filesets with each new project. Just define the layer sets you need for certain design phases/disciplines and store these as an office-specific standard. You can reuse the layer sets time and again – even in new projects.

Benefits during the analysis phase

In order for the interaction between elements to function cleanly, the walls and columns in question have to reside in the same drawing file. This is also the case for certain analysis and evaluation operations. With layers, you can meet these requirements easily.

Easier to assemble layouts

Layer sets are user-defined compilations of layers. These can also be used when editing and assembling layouts. When assembling a layout, you can choose to display only the elements in a specific layer set- switching between 1:50 and 1:100 is thus no problem.

Simplified data exchange via interfaces

Exporting drawing files to DXF/DWG layers is easier as you can assign each layer in a drawing file to a different DXF/DWG layer. When importing DXF/DWG files, the DXF/DWG layer structure can be automatically integrated in the layer hierarchy.

Relationship between layers and drawing files

➡ Only available when working in a project-based manner

The use of layers doesn't mean that drawing files don't play a role when it comes to organizing your data. With large project in particular, a combination of both is essential. With the same structural depth, the number of drawing files required is far less when working with layers.

The number of drawing files you need not only depends on the size of the project, but also on your hardware. Modern, fast computers with a lot of memory can handle a lot more data per drawing file without this leading to a noticeable downturn in performance. To be on the safe side, however, it is advisable to settle for a compromise between drawing file size and computing power in order to avoid pushing the hardware to its limits.

The interplay between layers and drawing files depends on the following factors:

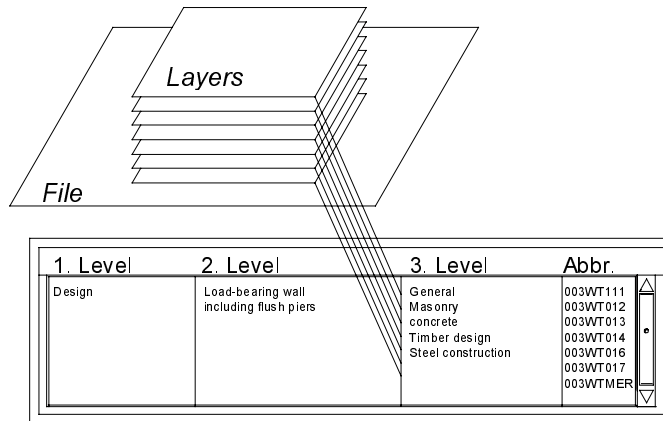
- The size of the project and the number of designers involved at any one time.
If several designers are working on one floor, create one drawing file per area of responsibility (e.g., East Wing, Central Unit, West Wing, for example.)
- Simultaneous involvement of specialist designers on the project. Separate drawing files should always be used for the specialist designs in order to facilitate concurrent activity.

Layer hierarchy

The management of layers and layer structures is generally the responsibility of the system administrator. This person defines which layers are used, sets up the design groups and grants access rights. Employees (architects, engineers, etc.) are assigned to the design groups, and thus they are granted the relevant access rights to the individual layers.

Layers are not arranged linearly but hierarchically in a tree structure. An exception is the default layer which is not integrated in the hierarchic structure. The layer structure consists of the following three hierarchic levels:

- The first level describes the layer category (e.g., ARCHITECTURE, ENGINEERING).
- The second level is divided into special fields within the category (e.g., Design, Room).
- The third level consists of the layers themselves. Every layer has a full (long) name with a detailed explanation of the contents. Each layer also has an abbreviated name (e.g. Ceiling, RA_CE).



The current layer's abbreviation is displayed on the Format toolbar. The long name is displayed in the ToolTips of the Select, Set Layers dialog box.

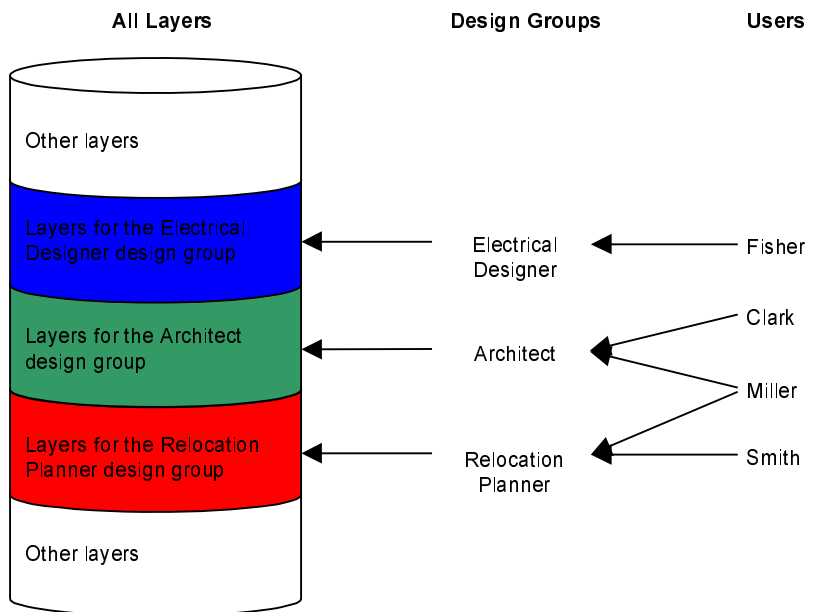
When you create a project, you can decide whether you want to use the layer structure of the office standard or a project-specific layer structure. Detailed information is provided in Using Project Resources.

You can save layer structures and give them names. If you have assigned linestyles, they are saved together with the layer structure (with the same file name plus the extension .sty). When importing a saved layer structure, you can import this linestyle file, too.

Using design groups

➡ Only available when working in a project-based manner

Access privileges can be controlled at layer level by means of design groups. Design groups are generally assigned when there are several people working on the same project: When installing with Workgroup Manager, the individual users are assigned to one or several design groups. Thus, the users can only see and/or modify the layers to which the relevant design group is granted access rights.



Design groups not only control who accesses which layers. By defining design groups with a selection of layers that are available while drawing, the entire design process can be facilitated.

The design group called ALLPLAN is created automatically after the program has been installed. This group has read and write access for all layers. Thus, all users can see and modify all layers.

Using layer sets

A layer set is a set of layers that you can select when compiling and arranging layouts. You can also use layer sets control which layers are visible/hidden. Only the elements in the selected layer set are displayed in the layout.

For example, you can select a layer set for working drawings so that only the data that is relevant to a working drawing appears in the final printout.

Managing Data With ProjectPilot

➤ Only available when working in a project-based manner

You use the **ProjectPilot** to create and structure projects in a simple and clear manner.

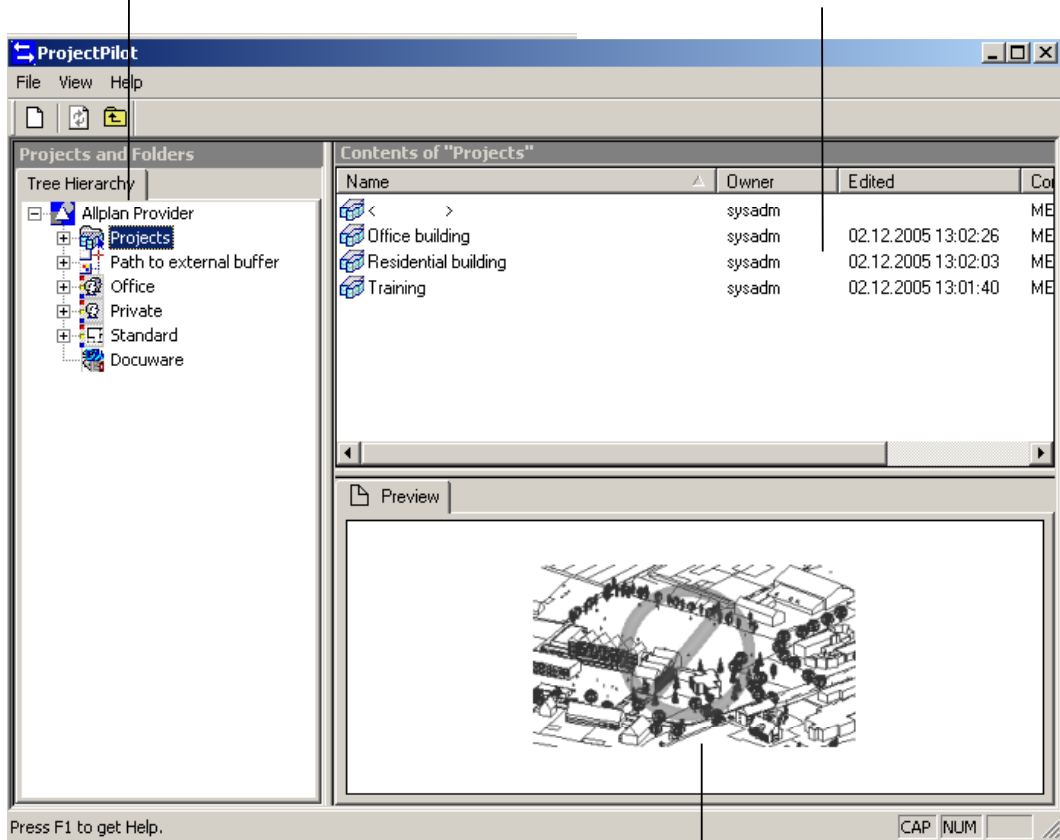
The **ProjectPilot** is a powerful data management tool developed specially for the data structure of Allplan 2006. The **ProjectPilot** provides tools for copying, moving, renaming and deleting data (e.g., projects, drawing files, symbols, etc.).

If you are already familiar with Windows Explorer, then you'll find that working with **ProjectPilot** is just as easy. Most steps can be accomplished via the shortcut menu and you can move or copy files by dragging and dropping them.

ProjectPilot's user interface

Projects and folders are displayed in a tree structure in the area on the left. Click the plus sign (+) to display the levels in the folder. Click on the name of a folder to display its contents in the right pane. You can display the contents of the folder and open it at the same time by double-clicking.

The folders and documents contained in the selected node (on the left) are displayed in the area on the right. You can sort the displayed documents by clicking on the title of a column. Clicking in the background with the right mouse button lets you display the documents as a list or as icons.



A preview of the currently selected document is displayed in the preview area. To move the preview, click it with the left mouse button and drag. To zoom in on an area in the preview, open a selection rectangle using the middle mouse button. Double-clicking with the left mouse button or pressing the * key on the number pad restores the preview to its original size. To display in an isometric view, use the number keys on the number pad. Check that the Num Lock key is active as you do so.

Common approaches in ProjectPilot

If you are already familiar with Windows Explorer, you will quickly find your way around the ProjectPilot. Most steps can be accomplished via the shortcut menu or by dragging and dropping.

Sorting the displayed documents

You can sort the displayed documents by clicking on the title of a column. The first time you click the column title, the documents are sorted in ascending order. Clicking the same column title again sorts the documents in descending order. An arrow is displayed to indicate which column is being sorted and whether sorting is in ascending or descending order.

Name ▲	Number ▲
Details	6
Grid	1
Layout	2
Open-space Planning	5
Outdoor Facilities	8
Plot Layout	10
Site Plan	4
Story	9
Survey	3





Sorted in ascending order (arrow points upwards) and according to drawing name

Name ▼	Number ▲
Views and Sections	7
Survey	3
Story	9
Site Plan	4
Plot Layout	10
Outdoor Facilities	8
Open-space Planning	5
Layout	2
Grid	1

Sorted in descending order (arrow points downwards) and according to drawing name

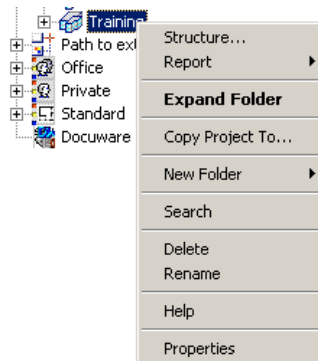
Copying and moving with drag & drop

Instead of using the shortcut menu, you can also drag & drop selected documents in order to move or copy them. Select the documents, click within the selection with the left mouse button, keep the mouse button pressed down and then drag. You can tell whether this is possible by the shape of the cursor when the mouse pointer is positioned over the destination area.

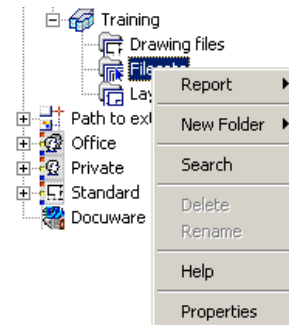
Cursor	Meaning
	The document will be copied to the folder that is below the mouse pointer.
	The document will be moved to the folder that is below the mouse pointer. Note: To move documents, hold down the SHIFT key while dragging the documents.
	A shortcut to the document will be created in the folder below the mouse pointer (e.g., when assigning drawing files to a fileset).
	The document cannot be placed here.

Working with the shortcut menu

Almost all tools available in the ProjectPilot can be accessed via the Shortcut menu. Depending on which element you click, a shortcut menu appropriate to the element opens.



Shortcut menu of a project



Shortcut menu of the fileset folder

Using the preview









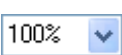
A preview of the selected document is displayed in the preview area. In this view, you can zoom, pan and select isometric views. You can specify on the View menu - Preview whether and at which position the preview is to be placed.

- **To disable the preview:** on the View menu, point to Preview and click None.
- **To zoom:** use the left mouse button to open a selection rectangle around the area you want to view in detail. The cursor changes to crosshairs.
- **To pan in the preview:** move the view with the middle mouse button. The cursor changes to a hand. Alternatively, use the cursor keys.
- **To restore the full view of the image in the preview:** double-click in the preview area with the middle mouse button, or press the * key on the number pad.
- **To display in an isometric view:** use the number keys on the number pad. Please note that NUMLOCK and the preview window have to be enabled.

Note: The preview is displayed with specific documents (drawing file, layout) only.

Generating and printing reports

You can display and print out reports by clicking the category for which you wish to generate a report with the right mouse button and then clicking **Report** on the shortcut menu.

Icon	Use
	Goes to the first page in the list.
	Scrolls back one page.
	Displays the current page and the total number of pages.
	Scrolls forward one page.
	Goes to the last page in the list.
	Prints out the individual page or all the pages in the list on a standard Windows printer.
	Opens the Print Setup dialog box, where you can choose a different printer and make settings.
	Exports the list in different formats.
	Enlarges or reduces the display.

A company logo and address is displayed in the header and footer of a report. The program ships with the logo and address of Nemetschek AG but, of course, you can replace this information with your own logo and address:

- To replace the logo displayed in the header, enter your company logo in the `rptlogo.bmp` file in the `nem\allplan\etc` folder. In the report the logo is resized to a size of 120x120 pixels. This change has to be made at all workstations.
- To modify the information displayed in the footer, enter Allplan 2006, select **Tools – Defaults – Office Name and Address** and enter the name and address of your company. If you are working on a network with Workgroup Manager, only the administrator (sysadm) can make these entries or changes.


Using the Mouse

The three mouse buttons are associated with functions that change to reflect the current requirements in Allplan 2006. A distinction is made between three different states:

- No tool is activated.
- A drafting tool is activated (e.g. the Line tool).
- An edit tool is activated (e.g. for deleting).

Note: The information in the table is based on a 3-button mouse. If you are working with a 2-button mouse, you can simulate the middle mouse button by pressing the CTRL key and the left mouse button at the same time.

Table 1: no tool is activated

Mouse button	This...	Does this...
	Click on element	Selects the element with handles.
	SHIFT+click on element	(Un)Selects an additional element with handles. Selects an entity group or a symbol with handles.
	CTRL+click on element	Selects an additional element with handles.
	Double-click on element	Displays the element's properties.
	CTRL+click on an element	Displays the element's format properties.
	Clicking and dragging in the workspace	Selects elements with handles. Depending on the setting in the Filter Assistant, the program also selects intersected elements.
	SHIFT+clicking and dragging in the workspace	(Un)Selects elements with handles in a region.
	Double-click in the workspace	Opens the Open on a Project-Specific Basis: Files and Filesets dialog box.
	CTRL + double-click in the workspace	Opens the Layer dialog box.



Mouse button	This...	Does this...
Middle 	Double-click	Sets the display scale so that all the visible elements are displayed in their entirety.
	CTRL + double-click	Regenerates the section that is visible on screen.
	Click and drag	Pans in the current window.
	SHIFT + click and drag	Pans in the current window.
	CTRL + click and drag	Zooms in.
	ALT + click and drag	Zooms dynamically (cursor = center). Depending on the direction in which the cursor is moved, the system zooms in or out.
Right 	Click on an element	Displays the shortcut menu for the element clicked. The shortcut menu contains general tools and edit tools that are specific to the element in question.
	Click in the workspace	Displays the general-purpose shortcut menu.
	Double-click on an element	Activates the tool that was used to create the element clicked and copies all its settings.
	Double-click in the workspace	Opens the Layer dialog box.

Table 2: a drafting tool is activated (e.g. for drawing a line)






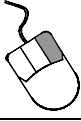
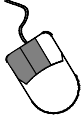
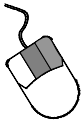
Mouse button	This...	Does this...
Left 	Clicking in workspace or on element	Places and snaps to points in the workspace.
	CTRL + click	Aligns points exactly with existing points (linear snap).
Middle 	Double-click	Sets the display scale so that all the visible elements are displayed in their entirety.
	Click and drag	Pans in the current window.
	SHIFT + click and drag	Pans in the current window.
	CTRL + click and drag	Zooms in.
	ALT + click and drag	Zooms dynamically (cursor = center). Depending on the direction in which the cursor is moved, the system zooms in or out.
Right 	Click in workspace	Opens the shortcut menu for entering points. Confirms entries when requested in the dialog line: <i><confirm></i> .
	Clicking on a toolbar	Quits a tool (= ESC key).







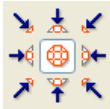




Table 3: an edit tool is activated (e.g. for deleting)








Mouse button	This...	Does this...
Left 	Click on element	Addresses or selects an element.
	SHIFT+click on element	Addresses or selects an entity group.
	Clicking and dragging in the workspace	Selects elements in a rectangular region.
Middle 	1 st click + 2 nd click in workspace	Selects elements in a rectangular region.
	Double-click	Sets the display scale so that all the visible elements are displayed in their entirety.
	Click and drag	Pans in the current window.
	SHIFT + click and drag	Pans in the current window.
	CTRL + click and drag	Zooms in.
Right 	Click in workspace	Opens and closes bracket feature. Confirms entries when requested in the dialog line: <i><confirm></i> .
	Clicking on a toolbar	Quits a tool (= ESC key).
Middle - left 	Clicking an element with middle and then left mouse button	Selects an entity group.
Middle -right 	Clicking on element with middle and then right mouse button	Selects elements that have the same pen thickness or linetype (switch in Global Options).
	Clicking with middle and then right mouse button in the workspace	Enables the selection rectangle. Use the left mouse button to enclose the desired elements in a selection rectangle.

Controlling the Display on Screen

In Allplan 2006, you can zoom in on any area of the design as exactly as you want to. The icons in the border of the viewport let you navigate freely on screen. These tools are known as 'transparent' tools; in other words, you can also use them while a different tool (e.g. Line) is active.

When multiple viewports are open, these icons appear in every viewport.

Icon	Name	Use
	Refresh	Sets the display scale so that all the elements in the visible files can be seen.
	Zoom Section	Zooms a section of the workspace. When there are several viewports, the section is displayed in the viewport where you clicked this button. The section itself, however, can be defined in any of the viewports. Requirements: you have not selected a perspective view and the same view is displayed in both viewports.
	Pan	Pans the section that is visible on screen by a vector that you specify by setting two points. Tip: You can also pan dynamically by pressing and holding down the middle mouse button or using the cursor keys .
	Regen	Regenerates the section that is visible on screen.
	Reduce View	Reduces the section displayed on screen in incremental steps. (The display scale doubles.)
	Enlarge View	Enlarges the section displayed on screen in incremental steps. (The display scale halves.)
	Standard Views flyout	You can choose between plan view and any of the standard views.
	3D View	Opens the 3D View dialog box, where you can set and save views.
	Navigation Mode	In the viewport : sets a perspective view. When dragging, the cursor behaves in the same way as in animation windows (sphere mode, camera mode). In the animation window : when switched off, you can draw in animation windows as in isometric windows.
	Previous View	Restores the previous view.
	Next View	Displays the next view.

Icon	Name	Use
	Save, Load View	Saves or restores a custom view. This way, you can save frequently used views and retrieve these whenever they are needed.
	Display Scale	Sets the display scale.
	Always on Top	Places the viewport so that it is always on top (i.e., in front of) the other ones.
	Hidden Line Image	Displays the current contents of the screen as a hidden line image (on/off). The drawing is displayed as a hidden line image the next time you click Refresh or Regen .
	Activate Section	Displays an architectural section that you have defined with  Define Section . You can define the section's clipping path by pointing and clicking, or by entering the section identifier.
	Copy to Clipboard	Copies the current contents of the screen to the Clipboard. You can then paste it from the Clipboard into other applications.

Display Sequence

Sequence in which elements are displayed on screen

By default, elements are displayed in the sequence in which they were created or modified. This way, the element you created or modified last is always on top. The program provides several settings for changing the sequence in which elements are displayed. For example, you can prevent fills from hiding the elements below.

The property called **Sequence** defines the sequence in which elements are displayed and it is saved as a number between -15 and +16. This value controls how elements are displayed on screen: the element to which you have assigned the highest value is displayed on top of all the other elements. When two elements have the same number, the element you created last is displayed on top of the other one. New elements get a fixed default value. Allplan 2003 elements with the **Always on Top** format property are automatically assigned a value of 12. More information is provided in Values for the Sequence element property.

Note: New elements are always displayed on top. The settings are only applied to the elements after you click **Regen**.

In the case of elements with subordinate elements (such as smart symbols, element groups, XRefs), the setting made for the parent element has priority over the setting made for the child elements. If, for example, you configure the program to display an element group on top of another element group, all the elements of which this element group consists are displayed on top of the elements of the other element group, regardless of the settings made for the individual subordinate elements.

The 'Sequence' element property


The sequence in which elements are displayed on screen depends on several factors, which are specified in the table below.







The No. column shows the priority; the lower the number the higher the priority of the corresponding setting. For example, elements in drawing files open in reference mode are always displayed behind elements in the current document or in files open in edit mode, regardless of other settings.

No.	Setting	Explanation
1	File status	Elements in the current document or in files open in edit mode are always displayed in front of elements in files open in reference mode.
2	Show/Hide tool, Surface elements in background option	When this option is enabled, surface elements (hatching, pattern, fill) are displayed behind other elements.
3	Sequence element property	See Sequence element property
4	Time when elements were created/modified	Elements that were created/modified later are displayed in front of other elements.

Modifying the display sequence

Two methods are provided for modifying the sequence in which elements are displayed:

- You can select  **Modify Format Properties** (Basic Tools toolbar or **Format Properties** on the shortcut menu of the element selected) and enter a value between -15 and +16.
- You can click an element with the right mouse button, choose **Sequence** on the shortcut menu and select the desired function:

Function	Effect
 Into the foreground	Moves the element to the top. This element is assigned a priority value of +16.
 Into the background	Moves the element to the bottom. This element is assigned a priority value of -15.
 One level to the front	Moves the element up one level. The priority value of this element is increased by a factor of 1.
 One level to the back	Moves the element down one level. The priority value of this element is reduced by a factor of 1.
 In front of another element	Moves the element in front of another element. Compared with the selected element, the priority value of the modified element is increased by a factor of 1.
 Behind another element	Moves the element behind another element. Compared with the selected element, the priority value of the modified element is reduced by a factor of 1.

Activating and Quitting Tools

In Allplan 2006 you can activate, execute and quit tools in different ways.

Activating tools

- You can click the relevant icon.
- You can double click the element with the right mouse button. This activates the tool that was used to create the element. All the settings and parameters of the element you clicked are used.
- You can activate tools via shortcut keys. An overview of predefined shortcuts is provided on the **Help** menu under **Shortcut Keys Table**. In addition, the shortcut key for tools where one has been defined is shown in the ToolTip.
- You can use the shortcut menu.
- You can activate tools via the menu bar.

Executing tools

Instructions are provided in the dialog line after you have clicked a tool. For example:

- **Point snap** (e.g., **Line tool: *From point***):
- **Selecting elements** (e.g., **Delete tool: *Select elements to delete***).

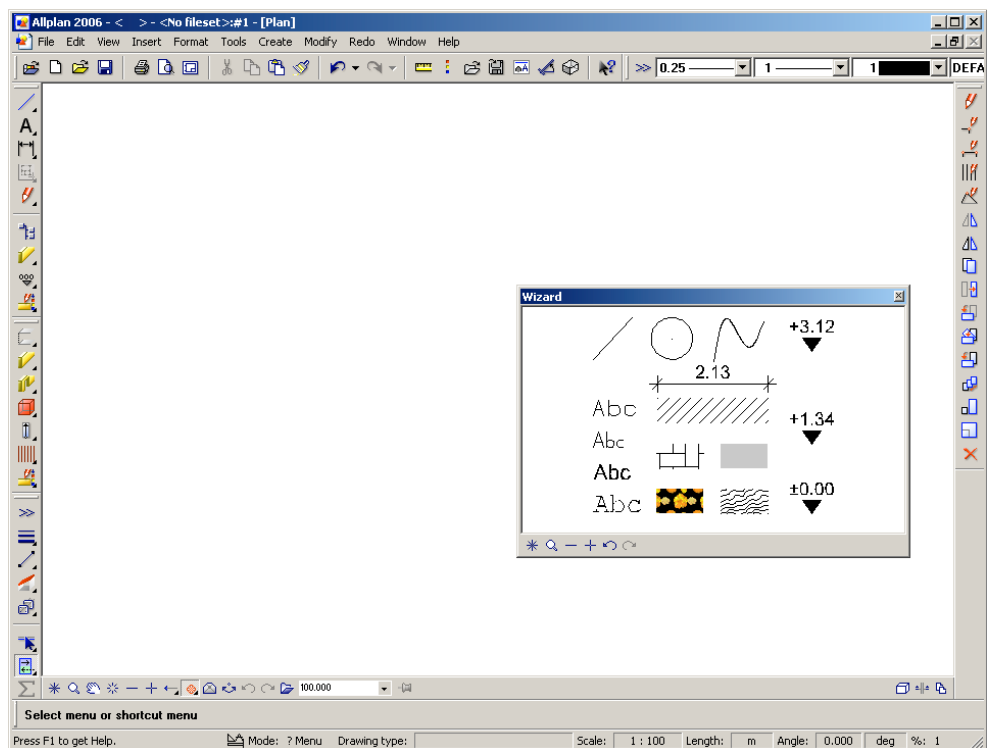
When appropriate, a dialog box or Context toolbar is displayed so that you can make settings for the function.

Quitting tools

- Press ESC on the keyboard.
- Click a toolbar with the **right** mouse button.
- Activate a different tool.

The Wizard

The Wizard is small window which is displayed in the workspace and includes a pictogram-like key representing all frequently used tools. When you click an element with the right mouse button, a Shortcut menu opens with related tools is displayed. This way, the Wizard saves you the effort of looking for icons and tools. All you need to do is click an element with the right mouse button and select a tool on the Shortcut menu.



As opposed to a 'normal' Allplan 2006 window, you cannot draw in a Wizard window. But by means of the icons at the bottom viewport border, you can use various tools for controlling the display on screen. The Wizard window has the Always on Top property and cannot be maximized or minimized.


Several predefined Wizard files are provided with the program. In addition, you can also create your own Wizards.

Correcting Errors

Tip: If you inadvertently deleted elements, you can quickly restore them by immediately double-clicking in the workspace with the right mouse button (the Delete tool must still be active).

You can undo several steps in one go. Click the arrow beside the Undo icon, keep the mouse button pressed down and drag the cursor over all the steps you want to undo. Then release the mouse button.




 **Redo** redoes operations that you have undone. Redo operations, however, are not possible if you have added new design entities in the meantime.

Note: You can also activate the Undo tool while another function is active. The function in question will close and all the entries you made while it was active are “undone“.

Saving Your Work

Saving NDW-format files

NDW-format files have to be saved manually:

- Make sure that you save your work regularly. To do this, click  Save (Standard toolbar).
- A confirmation prompt to this effect is displayed every time you exit Allplan 2006.

Saving drawing files




When you exit Allplan 2006, all open drawing files are saved automatically. You do not need to save your data explicitly (like in other programs) prior to exiting Allplan 2006.


Exception: NDW-format files have to be saved manually.

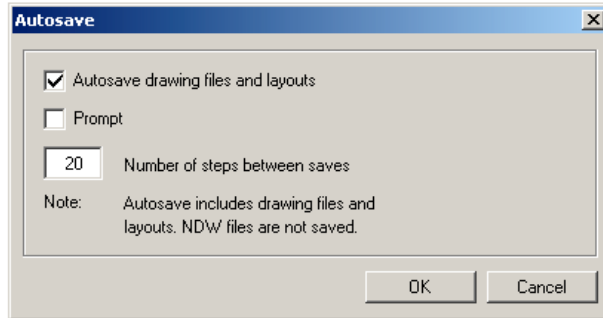
In certain circumstances, Allplan makes backup copies of your drawing files and/or layouts. For more information, see Using .bak files.

While you work in Allplan 2006, you can save your data manually as well as have the program do so automatically after a certain number of steps. The data in the current drawing file and in those that are open in edit mode is saved. And when you perform certain actions (e.g. switching to the Plot Layout module), the program automatically saves your work, too.


The following actions cause the data to be saved:

- When you switch to a different drawing file, fileset, layout or project.
- When you switch to the Plot Layout module.
- When you export data from Allplan 2006 using  Export Data.
- When you save manually by clicking  Save (Standard toolbar) or  Save and Compress (File menu).

- When saving automatically. You can activate this function and define the number of steps between saves in  **Global Options, Miscellaneous** tab.



Note: The interval here is based on the number of tools you activate and not the time elapsed. If you spend some time drawing with the same tool, therefore, data is not saved automatically unless you quit the tool in between.

Saving automatically or manually (using  **Save, Standard toolbar**) does not cause the data to be compressed; in other words, the document size will not be smaller although you have deleted data. The reason for this is that the data you have deleted is still available in the memory so that you can redo the deleted data even after saving. To compress the data when you save manually, use **Save and Compress (File menu)**. All the other actions that cause data to be saved also compress the data in question.

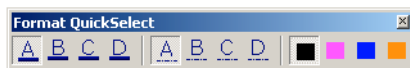
Defining Pen Thickness, Linetype and Line Color

Before you draw an element, you can define its line thickness (pen thickness) and the linetype on the **Format** toolbar. When the **Color** stands for pen option is active (this is the default), the color is set automatically with the pen.



If you are working with layers and layer attribute matching is active, the format settings are set automatically in accordance with the current layer.

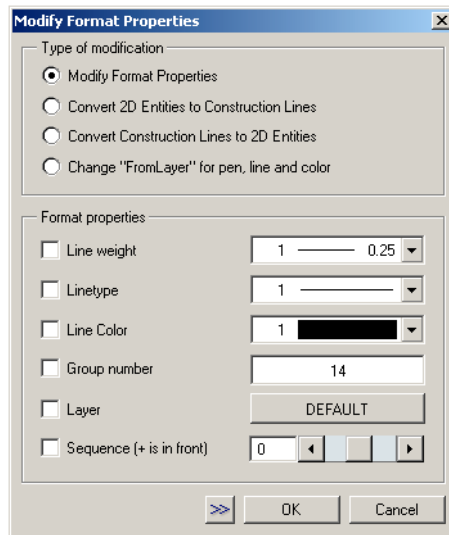


The **Format QuickSelect** toolbar includes a dropdown list with the four most important pen thicknesses, linetypes and line colors. You can configure which settings are presented on the toolbar in **Defaults**, **Pens & Pen Assignments**, **Lines & Line Assignments** and **Colors & Color Assignments**.



Modifying Pen Thickness, Linetype and Line Color

Use  **Modify Format Properties** (Edit flyout) to modify the pen thickness, linetype and line color of an element. After selecting the tool, you can specify which format properties are to be changed in the dialog box that appears. With  you can match the format properties of an existing element.



Note: The format properties of individual elements can also be modified via the shortcut menu by clicking **Format Properties**.

Using the Clipboard

In Allplan 2006 you can copy elements to the Clipboard and insert them in any drawing file or application. A number of tools is provided on the Dynamic toolbar to assist you when placing elements.

Note: You cannot use the Clipboard when you define patterns and fonts.

Special features in Allplan 2006

You can use the Clipboard in Allplan 2006 just as you would in any other Windows application. Note, however, that there are some special elements and properties:

- **Layers:** elements retain their layers. Elements on frozen layers (visible and hidden) are not copied.
- **Group number:** elements get new group numbers when they are placed. Elements that used to have identical group numbers will now be given the same group numbers, too.
- **File size:** if the admissible file size is exceeded, the program will issue an error message.
- **Text:** if the application from which you have copied text to the Clipboard is an OLE server (Microsoft Word or Microsoft Excel, for example), the contents of the Clipboard are pasted as an OLE object into Allplan 2006. To paste the contents of the Clipboard as normal text, use **Insert Contents – Unformatted (Unicode) Text**. Text of this kind is assigned the text parameters currently set.
- **FEA and Allfa elements:** FEA and Allfa elements cannot be copied to the Clipboard.

Pasting elements from the Clipboard into Allplan 2006

A number of tools is provided on the Dynamic toolbar to assist you when pasting elements.

Allplan elements are inserted as original data (in other words, with attributes and properties). If you paste text into Allplan 2006, the current text settings apply. You can also insert bitmaps using the Clipboard. The following settings apply:

- Color depth: several colors
- Transparency: off; color: black.
- Width: 100 pixels = 1000mm

The Clipboard supports DIB (or BMP) and WMF-format bitmaps.

Note: If the Clipboard contains several formats supported by Allplan 2006, you can choose a format using the **Insert Contents** tool.

Pasting Allplan 2006 elements into other applications

When you use Ctrl+V to paste Allplan 2006 elements into another application, they are inserted as Windows Enhanced Metafile. Text elements (e.g. normal text lines, paragraph text, component numbers, labels) are always pasted as “pure” text.

Paste to Original Position

Use **Paste to Original Position** to insert Allplan 2006 elements at their original position. If the clipboard is empty or does not contain any Allplan 2006 elements, this command is not available.

Note: If you insert these elements in the same document, they exist twice at the same position.

Insert contents

You can use this tool to specify which element on the Clipboard is to be pasted into Allplan 2006. This tool is only available when the Clipboard contains several formats supported by Allplan 2006 (e.g. bitmap and pure text).

Using OLE Objects

The OLE concept lets you exchange information between different applications. Data from a source document (e.g. Microsoft® Word) is associated with or embedded in an Allplan document. When you select the embedded data, the original application opens and you can edit the data in the source document.

The following object types can be embedded in Allplan 2006 (depending on the applications installed):

- Excel files (.xls)
- Word files (.doc)
- RTF files (.rtf)
- PowerPoint files (.ppt)
- Bitmaps (e.g. .bmp, .jpg)

The program to which the link is established must be an OLE server program (such as many Microsoft Office programs). Otherwise, the linked program cannot provide OLE objects.

Linking and embedding OLE objects

Two approaches are available for inserting OLE objects in Allplan 2006. The difference lies in the way in which the objects are saved in Allplan 2006:

Linking objects

When objects are associated with Allplan, a link between the Allplan 2006 document and the object in question is established. When the object changes, the link in Allplan 2006 can be updated manually. Double-clicking the linked object in Allplan 2006 opens it in its original application and you can edit it as usual. When objects are linked with Allplan, the path to the source document and thus, to the original application must be retained. When you rename one of these two, you have to establish the link again.

Embedding objects

When objects are embedded in Allplan 2006, a copy of the source document is placed in the Allplan document. After you have inserted this copy, it is no longer linked to the source document; in other words, the Allplan 2006 document cannot be updated to reflect any changes you make to the source document. Embedded objects can be edited either in Allplan 2006 or in their original application; but any changes you make to the object have no effect on the source document.

Linking and embedding bitmaps as OLE objects

When you want to insert bitmaps as OLE objects in Allplan 2006, you should pay attention to the size of the objects to be inserted. It is not the file size that is decisive but the size of the bitmap in the memory. You can determine this size by clicking **Edit Bitmap** on the **File** menu, selecting the file to be checked and clicking **File Details**.

The following limiting values apply when you want to insert bitmaps as OLE objects in Allplan 2006:

- 3,800,000 bytes uncompressed at a file size of 20 MB (normal)
- 12,000,000 bytes uncompressed at a file size of 128 MB (maximum)

After having inserted the bitmap, you should save the drawing file. This reduces (compresses) the data in the drawing file. If the file exceeds the values mentioned above, you can use the **Edit Bitmap** tool to resize the file and save it (under a different name).

For large bitmap files, you can use the **Bitmap** tool. Otherwise, these files cannot be inserted in Allplan 2006.

Transparency of OLE objects

The background of OLE objects can only be transparent or not transparent; the default setting is transparent. Transparent background means that the background color set in Allplan 2006 is displayed instead of the background color of the OLE object.


Therefore, you should disable the transparent setting when you use a black background in Allplan 2006 and the OLE object you have embedded is a Word document containing black text, for example.

Editing OLE objects

Double-clicking an OLE object opens it in its original application and you can edit it as usual. You can also open and edit objects linked with Allplan directly in the original application and then update them in Allplan 2006. All you have to do is double-click these objects and edit them.

Just double-click these objects and edit them.

Embedded objects can be edited either in Allplan 2006 or in their original application; but any changes you make to the object have no effect on the source document.


You can use Allplan 2006 tools such as Copy, Move etc. to edit OLE objects. To change the size of OLE objects, use the  Resize tool.

Using XRefs

You can place a document (drawing file or NDW-format file) as a XRef in a document as often as you need. The document will update automatically to reflect any changes you make to the document you have inserted as a XRef. XRefs can be inserted at any scale and at an angle you specify. Please note that you cannot use empty documents to insert them as XRefs.

XRefs can be placed as normal or advanced XRefs. For more information, see Comparison between normal and advanced XRefs.


A XRef is always placed so that its size matches that of the elements in the document. If the size changes later, you can use **Update All XRefs** on the shortcut menu to update the extents. XRefs can be clipped (but this is only possible when you modify XRefs; you cannot clip XRefs when placing them).

You can enable and disable the display of XRefs and XRef borders in  **Show/Hide**.

XRefs are always placed on the current layer. But the individual elements of which a XRef consists retain their layers. When you modify the status of a layer, you need to select the **Regen** function in order for the elements within the XRef to update automatically.

Please note that a document which already contains a XRef cannot be inserted as a XRef again. If a document which is inserted as a XRef no longer exists, the border and the reference are retained, and the file name of the associated document is displayed in the border.

Editing XRefs

You can edit XRefs using the following Allplan 2006 tools: Delete, Copy, Move and Rotate. You can use  **Modify Format Properties** to change the format properties of the XRef (e.g. the layer). Other Allplan 2006 tools cannot be applied to XRefs.

The scale and the angle of the XRef can be modified at a later stage. You can also change the clip region later on.

XRefs can only be modified and edited as a single entity; you cannot modify individual elements of a XRef. Selecting **Edit Reference Drawing File** on the shortcut menu of a XRef lets you directly open the drawing file which has been inserted as a XRef.

When you change the display sequence of XRefs, this modification always affects the entire contents of the XRef file.

Restrictions on the use of XRefs

When you want to use normal XRefs in Allplan 2006, please note the following restrictions:

- **Point snap:** the system only snaps to points on the outline of the XRef; elements within a XRef are not snapped.
- **Lists/schedules:** elements are not evaluated and analyzed in the form of lists/schedules.
- **Animation:** elements are not displayed in animated mode.
- **Element interaction:** architectural elements within a XRef and architectural elements in the document do not interact.
- **Hidden line image:** normal XRefs are not displayed in hidden line images.

Note: These restrictions do not affect advanced XRefs. For more information, see Comparison between normal and advanced XRefs.

Comparison between normal and advanced XRefs

The following table shows a comparison between normal and advanced XRefs.






Feature	Advanced	Normal
Snapping to points on individual elements	x	-
Taken into account when outline auto-detect is activated	x	-
Displayed in animation mode, hidden line images and perspective views	x	-
Analyzed and evaluated in lists and schedules (not with engineering elements!)	x	-
Adjustment of dimension text and size of text when XRef is resized	x	-
Clipping	-	x
Display of detailing windows	-	x

Note: When you insert advanced XRefs, the required disk space increases by the data volume of the document contained in the XRef as this data is also stored in the memory. Normal XRefs do not increase the data volume.

Selecting Elements, Overview

In order to edit elements you need to select them. First, select the edit tool (e.g., Copy) and then select the elements to which the tool is to be applied. You can select elements either by clicking them or by defining a region around the elements you want to select. You can use the Filter Assistant toolbar to help you select elements.





The following table shows a complete overview of selection options:


To do this ...	Do this
Select an element.	Click the element.
Select several elements and/or regions.	Select the  Brackets feature in the Filter Assistant, click the elements and/or specify the regions. Then close the brackets. You can also open/close these metaphorical brackets by right clicking in the workspace.
Select elements in a region.	<p>To specify a selection rectangle:</p> <p>Press and hold down the left mouse button to open a selection rectangle. In  Global Options, Entry tab, you can specify that selection rectangles are only closed when you click a second time. In the Filter Assistant you can specify whether elements fully bounded by the region, fully bounded and intersected, or only intersected elements are selected.</p> <p>To specify a fence:</p> <p>Click  Fence and enter the points to define the outline of the fence.</p>
Select all elements.	Some tools (e.g. Export) let you select all the elements in the current document by clicking All in the Input options.
Reselect the elements that were selected last.	Click  Reselect in the Filter Assistant.
Select elements with the same group number.	Press the SHIFT key and click on an element.
Select elements with the same pen thickness or linetype.	Click on an element with the middle and then right mouse button. This selects all the elements in the current document that have the same pen or linetype. Whether elements with the same pen or with the same linetype are selected depends on the setting in  Options – Global Options – Settings tab.

Selecting elements by entering a region


You can also select elements by specifying a region rather than clicking them. In the **Filter Assistant**, you can specify whether elements fully bounded by the region or fully bounded and intersected elements are selected.

The following options are provided in the **Filter Assistant**:

-  **In a direction-dependent manner:** The selection depends on the direction in which you enter the region:
To the left selects the elements that are fully bounded or intersected by the selection window. With this method, the selection rectangle is shown as dashed lines, and the area it covers is highlighted in light green while you select elements. To the right only selects the elements that are fully bounded by the selection window (with this method, the area is highlighted in blue).
-  **Fully Bounded:** selects the elements that are fully bounded by the selection window only (the area is highlighted in blue).
-  **Fully Bounded and Intersected:** selects the elements that are fully or partially bounded by the selection window (the area is highlighted in light green and the selection rectangle is shown as dashed lines).
-  **Intersected Only:** only selects the elements that are intersected by the selection window (the area is highlighted in pink and the selection rectangle is shown as long, dashed lines).

Note:  **Select elements in direction-dependent manner** is the default.

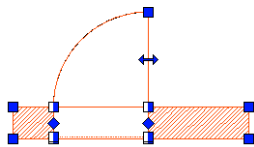
Note: The selection rectangle is only highlighted in color when you have enabled the **Show selection rectangle as colored area** option in **Global Options, Display** tab .

The easiest way to enter the region is to press and hold down the left mouse button and to enter two points that define diagonally opposite corners of a selection rectangle. You can also use  **Fence** to enter a freeform region.

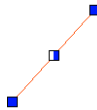
Selecting and editing elements using handles

Handles are small, filled boxes that appear at specific points of objects you have selected. You can copy, move, resize, rotate and stretch elements by clicking these handles and dragging.

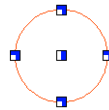
When editing elements using handles, you select the elements first and then edit them using the mouse.



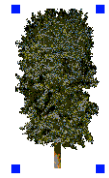
Wall with door



Line



Circle



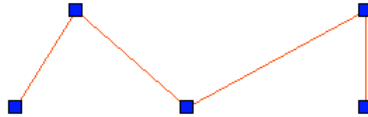
Bitmap area

- To resize bitmaps, bitmap areas and OLE objects so that their proportions are retained, use the handles displayed at the corners. Dragging with the handles displayed in the middle, however, will cause the elements to be stretched in one direction. Consequently, the proportions are not kept.
- You can stretch lines, polylines splines, arcs, circles, surface elements (hatching, patterns, fills) and architectural elements (as with the **Stretch Entities** tool).
- When you press and hold down the SHIFT key while moving or copying elements, they can only be moved in an orthogonal direction.
- You can change the radii of circles by clicking and dragging the quadrant handles. In addition, arcs can be lengthened or shortened by clicking and dragging the handles displayed at the end points or by entering the new included angle in the dialog line.

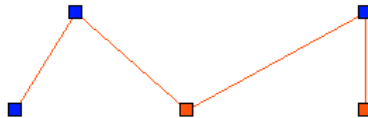
Types of handles

Handles assume different colors. You can change these colors in the **Global Options, Display** tab.

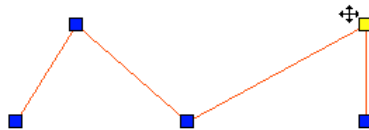
Non-selected handles: handles that are displayed in blue on elements you have selected.



Selected handles: handles you have selected in order to stretch entities; these handles are displayed in red. You can select handles by pressing and holding down the **SHIFT** key and clicking the handles. Subsequent modifications apply to all selected handles.








Dynamic handles: When the cursor is within the snap radius of a handle, the color of the handle in question will change to yellow. This indicates that Allplan will snap to this handle and use it as a snap point when you move elements. This way, you can place elements in a precise manner.







Handle shapes

You can tell which operations are possible by the shape and fill of the handle:

-  Stretching entities
-  Moving or copying
-  Resizing
-  Restricted moving (e.g. windows in walls)
-  Mirroring

Cursor shapes

When the cursor is within the snap radius of a handle, it assumes a certain shape, which varies depending on what is possible:

-  Moving
-  Stretching entities
-  Resizing using the handles displayed at the corners (e.g. bitmaps)
-  Resizing using the handles displayed in the middle (e.g. bitmaps); this causes the proportions to change.

Preview snaps to points

You can use the mouse to place and snap to points. You can also enter points and elements based on existing points:

Move the crosshairs near a point and the program will snap to this point and mark it with a red X.



Fig.: point snapped; highlighted by a red X

Points snapped are displayed in all views.


All the entries you make in the dialog line apply to the point snapped. Use the TAB key or SHIFT+TAB to toggle between the data entry boxes. You can also do calculations (as with  Calculator).



Fig.: calculation: $DX = 4\pi$, $DY = \sqrt{4} = 2$

Preview shows all points

The entries you make in the dialog line are automatically displayed in the preview. The red cross immediately jumps to the point defined by the entry you make.

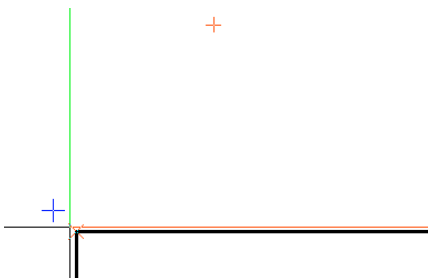


Fig.: preview of the point, at an offset of $DX=2$, $DY=3$ to the point snapped

When you press ENTER or click in the workspace, the point you have just entered serves as the start point of the new element (line in this example) or as the reference point for modification tools.



Fig.: press Enter or click in the workspace to place the point; the line is attached to the crosshairs

But before you place this point, you can also move the crosshairs to another point in the workspace: now all the entries you make in the dialog line apply to the new point snapped.

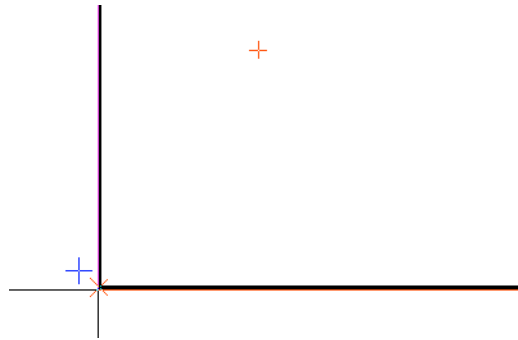


Fig.: preview of the point with an offset of $DX=2$, $DY=3$ refers to the new point snapped

Point snapped or point placed?

The dialog line indicates whether the program applies the values you are entering to a point snapped or to the last point placed:

- In the case of points snapped, the data entry boxes are highlighted in yellow.
- In the case of points placed, the data entry boxes are highlighted in white.

Value entered is proposed

The icons beside the data entry boxes are buttons: When you click an icon, the value entered is proposed for all further steps; but you can change it any time.

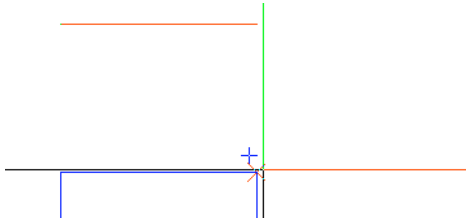

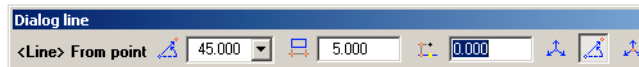


Fig.: DY=3 is proposed again for the next point snapped

Points based on polar coordinates

When you click  **Polar Coordinates** in the dialog line, you can enter the angle, length and offset length (from left to right) of the element in one go.

Click a different icon to disable this setting again.



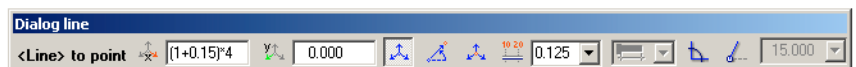
Entering length values and coordinates

General information


In Allplan 2006, length values and coordinates are always entered as real values. In other words, you do not need to recalculate the length each time to take the reference scale into account. For example, when designing a wall that is 8.60 m long, enter 8.6 (assuming that m is set for the unit of length).


Performing calculations in the dialog line

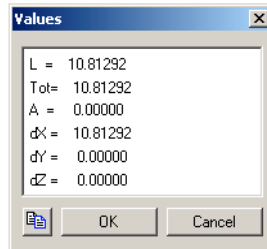
You can also perform calculations in the dialog line when the system prompts you to enter a length value.




Transferring measured values

Values obtained with  Measure can be transferred directly to the dialog line by clicking the value to be transferred in the **Measure & Compute** dialog box.


Using , you can copy the result to the Clipboard and paste it into other Windows applications by means of CTRL+V.



Transferring values from the calculator

Values you calculate with  Calculator are transferred straight to the dialog line.

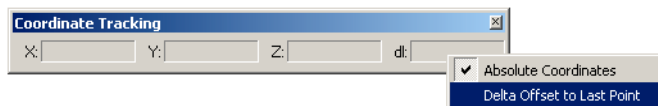
Displaying coordinates

Tip: To determine the coordinates of a specific point in an element or to place a point by entering its coordinates, use  **Global Point**.


To determine the point coordinates of an element, click the element with the right mouse button, select **Format Properties** and switch to the **Information** tab. The coordinates of all the points of the element you clicked are displayed.


The coordinates of the crosshairs in the x, y and z direction and the absolute distance to the last point entered are displayed on the **Coordinate Tracking** toolbar. On the shortcut menu you can specify whether the delta offset to the last point entered or the absolute coordinate values are displayed.

Note: Coordinates are not displayed in isometric views.




Local or global coordinates

In the dialog line  **Delta Point** (local coordinates) is usually set by default: in other words, the values you enter in the data entry boxes refer to the point snapped or the last point entered.

But you can switch to the global coordinate system at any time by clicking  **Global Point**: then the values in the data entry boxes refer to the global point (X=0, Y=0, Z=0).

Point snap

When you place a point with the left mouse button, you can snap to points on existing elements as you do so. You can snap to the following types of points: endpoints, midpoints, division points and points of intersection. You do not need to know the coordinates of these points, nor is it necessary to work with construction lines. When CursorTips are activated, a symbol (known as a CursorTip) is displayed at the center of the crosshairs. The CursorTip shows the kind of point that has been detected in the snap radius. Using  **Point Entry Options**, you can set the types of points the system is to snap and whether the system is to scan active, edit or reference drawing files for points.

By means of linear snap, you can align points exactly with existing points. Here, too, visual aids are provided to facilitate the process.

Note: If you have set a cursor snap angle, then this will have priority over any point snap settings you have made, as well as any other options you have selected on the shortcut menu. This means that only points in alignment with one of the set cursor snap angles will be snapped.

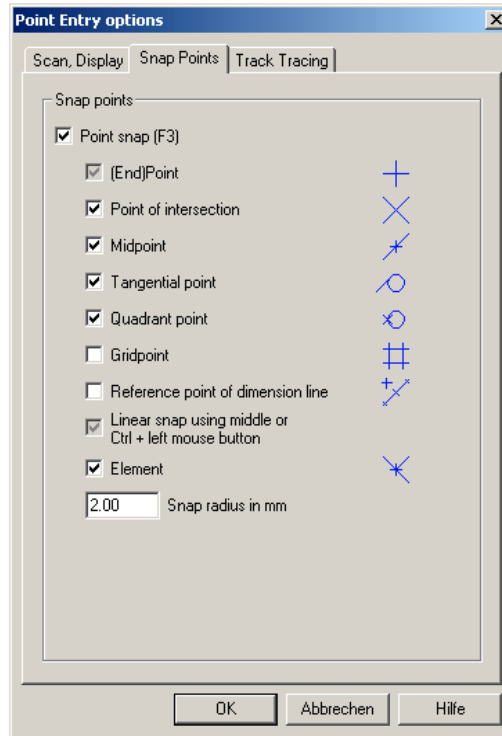


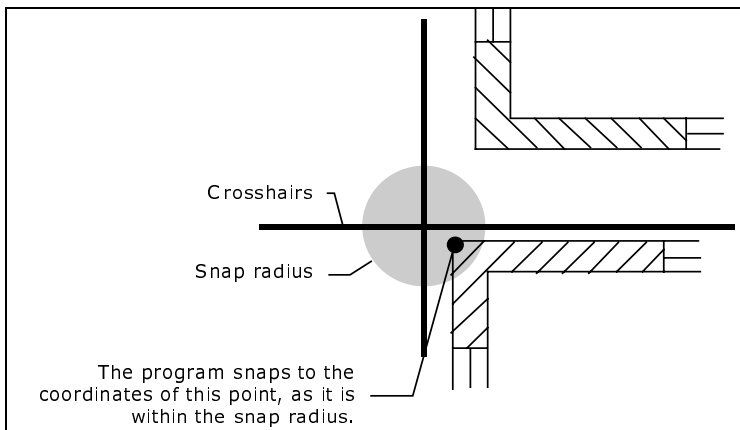
Fig.: activating the types of points you want to snap in the Point Entry Options

Point snap with the left mouse button

You can snap to points on existing elements. These points include endpoints, midpoints, division points and points of intersection. You do not need to know the coordinates of these points, nor is it necessary to work with construction lines.

Allplan 2006 scans for points within a defined radius about the crosshairs. This means that when you point or click in the workspace, the system “snaps” to points within a specific distance (the snap radius), even if the center of the crosshairs is not positioned directly over the point. You can set the size of the snap radius in **+** Point Entry Options (on the shortcut menu) in the Snap Points tab.

Depending on the setting made in **+** Point Entry Options, the snap radius can apply to the active drawing file or may also include passive drawing files (i.e., drawing files open in edit or reference mode).



Note: In **+** Global Options you can configure the system to emit an acoustic signal whenever you place an undefined point.

Linear snap

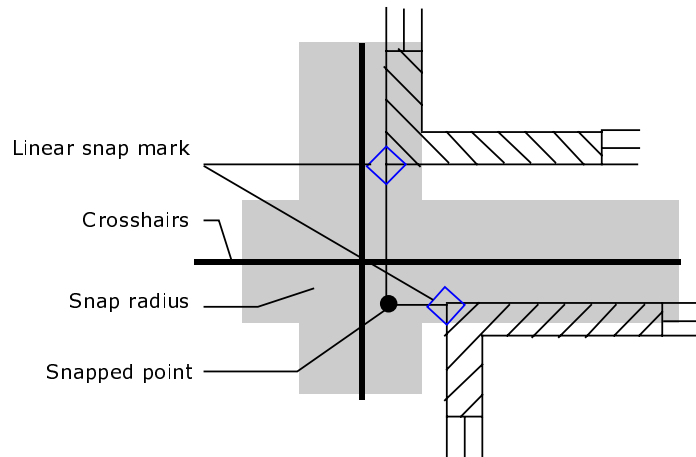
You can use linear snap to place points so that they are in direct alignment with existing points. To do this, use CTRL + left mouse button. If the system finds a point within the snap radius, the point set is placed in such a manner that it is exactly aligned with the nearest point found inside the snap radius.

Alignment is based on the selected system angle.


If the **Show linear snap** option in **+** Point Entry Options is enabled, the program highlights the points that are in perpendicular alignment before a button is pressed and creates temporary construction lines stretching to the point. This provides a better visual check when using the linear snap tool.

Tip: Drafting using linear snap is mainly useful with drawings consisting of few design entities. It becomes more difficult to align with the correct point as the number of design entities increases.











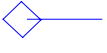
Note: Pressing the SHIFT key during this process will temporarily hide the linear snap feature.




Using CursorTips

When CursorTips are activated, CursorTips are displayed at the center of the crosshairs before you set points. These CursorTips indicate the type of point detected within the snap radius. CursorTips are displayed after you have activated a drawing tool (the Line tool, for example) and you move the crosshairs across the workspace. You can specify which types of points the system is to look for in  **Point Entry Options** provided on the shortcut menu.

The following CursorTips are displayed to indicate the different types of points:

Icon	Meaning
	Free point: There is no defined point within the snap radius. The circle represents the size of the snap radius.
	End point: Snaps to the nearest element endpoint. This option cannot be deactivated.
	Intersection: Snaps to the point of intersection between two elements within the snap radius.
	Midpoint: Snaps to the nearest midpoint of a line or polygon inside the snap radius.
	Tangential point: Snaps to the nearest tangential point of an arc, circle or ellipse.
	Quadrant point: Snaps to the nearest quadrant point on an arc, circle or ellipse.
	Gridpoint: Snaps to the nearest gridpoint inside the snap radius. Note:  Define Grid Settings defines the settings for the grid. The grid is only visible when  Grid on/off (on the Special toolbar) is active. Gridpoints are snapped even when the grid is not displayed.
	Reference point of dimension lines: Snaps to existing reference points when you draw dimension lines.
	Linear snap using middle mouse button or CTRL + left mouse button: With this, the nearest point in the snap radius is snapped with CTRL + left mouse button when placing points. This way, you can quickly draw mutually perpendicular lines. This option cannot be disabled.







Icon	Meaning
	Element: Snaps to the nearest point on an element within the snap radius.















Tools and options provided on the shortcut menu and in the dialog line

The dialog line and shortcut menu (point assistant) provide a number of tools and options to assist you in the process of snapping and entering points.




These tools and options are only available when the program expects you to enter a point - after selecting a creation tool, for example.












Tools and options provided on the shortcut menu

Icon	Point snap	Use
	Last Point	The last point entered is used.
	Temporary Point for Offset	The point snapped is fixed; the offset values entered in the x, y or z direction apply to this point even when the crosshairs snap to other points.
	Lock Coordinate	The current coordinate is used as the fixed coordinate. You can select the X, Y, or Z coordinate or a combination thereof on a submenu.
	Fixed X	All the point entries you make (in the dialog line or using the cursor) apply to the X coordinate snapped. This way, you can place points in exact alignment with existing points.
	Fixed Y	All the point entries you make (in the dialog line or using the cursor) apply to the Y coordinate snapped. This way, you can place points in exact alignment with existing points.
	Fixed Z	All the point entries you make (in the dialog line or using the cursor) apply to the Z coordinate snapped. This way, you can place points in exact alignment with existing points.

	Point of Intersection	Snaps to the point of intersection between two elements.
	Midpoint	Finds the midpoint of an element (e.g., a line) or a line that you enter.
	Center of Arc	Finds the midpoint of an arc, ellipse, part of an ellipse or spline.
	Division Point	Divides a line that you enter or an element into an arbitrary number of segments. The division points can be addressed by clicking or entering a number.
	Perpendicular	Finds the point on an element that is obtained by dropping a perpendicular line from an arbitrary point onto the element.
	Offset by Line	Places a point on an element that is at a specific distance from a (reference) point. The reference point is displayed as a direction symbol and is located at either the start or the end of the element, depending on which is nearest to the point you clicked. The distance between the displayed reference point and the contact point is displayed in the dialog line.
	Offset by Radius	Finds a point obtained from the point of intersection of two new circles that you enter.
	Define Point Symbol	When you employ the  Divide ,  Station Element or  Perpendicular through Station tools (in the Site Plan module), you can make additional point settings on the shortcut menu.
	Track/Extension Point	Places a point on a track line.
	Delete Track Points	Deletes all the track points placed; the track lines are determined again.
	Point Entry Options	Opens a dialog box in which you can make settings for CursorTips and specify point entry options.

Tools and options in the dialog line

Icon	Point snap	Use
	Global Point	Lets you enter absolute coordinates in the dialog line. These coordinates are relative to the origin (= global point) of the CAD system (0, 0, 0). You can also get the coordinates of an existing point by clicking it or entering its point number.
	Global X Coordinate	Finds a point based on its global X coordinate (relative to the origin (= global point) of the CAD system (0, 0, 0)).
	Global Y Coordinate	Finds a point based on its global Y coordinate (relative to the origin (= global point) of the CAD system (0, 0, 0)).

Icon	Point snap	Use
	Global Z Coordinate	Finds a point based on its global Z coordinate (relative to the origin (= global point) of the CAD system (0, 0, 0)).
	Delta Point	Lets you enter relative coordinates in the dialog line. You can place a point based on its offset relative to the point currently snapped or the last point entered.
	Delta Point X	Finds a point based on its offset in the X direction relative to the last point entered.
	Delta Point Y	Finds a point based on its offset in the Y direction relative to the last point entered.
	Delta Point Z	Finds a point based on its offset in the Z direction relative to the last point entered.
	Polar Coordinates	Places a point at a specific distance and a given angle from the last point.
	Outline Auto-Detect on/off	Enables/disables the automatic detection of closed, delimited areas.
	Array Length	Clicking this button places the reference point only on points of a grid whose settings you can specify. The current coordinates relative to the last point entered are displayed in a ToolTip attached to the crosshairs.
0.125	Array Length	This is where you select or enter the value for Array Length. This setting also applies for track lines.
		The following icons only appear when you have activated an entity creation function (e.g. Line):
	Lines at right angles (ortho constraint)	The line can only be drawn at right angles to the current system angle.
	Cursor snap	The line can only be drawn at specific angles.
15.00	Cursor snap angle	Define the cursor snap angle here (only possible when  is enabled).

Using the tools on the shortcut menu

Click with the right mouse button to access the tools and options on the shortcut menu, which assist you in the process of placing and snapping to points.

Tip: When you point to an element and click the right mouse button, the program automatically applies the tool selected on the shortcut menu to the element clicked and places the point. When you have opened the shortcut menu by clicking in the workspace, all you need to do is click an element and the program will apply the selected tool to the element clicked.

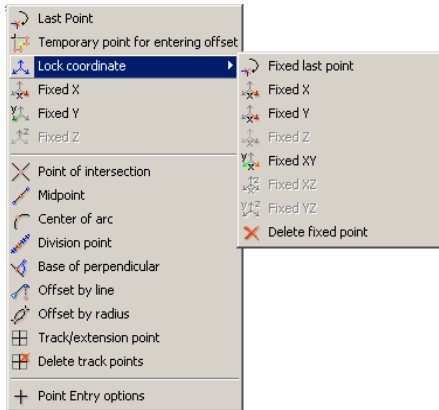


Fig.: tools and options provided on the shortcut menu

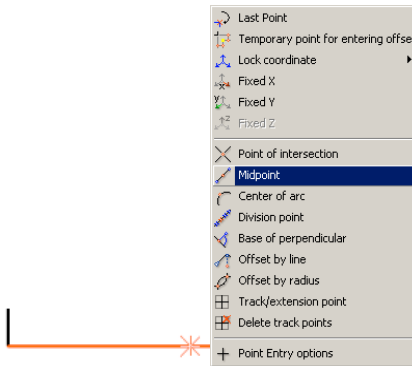


Fig.: the midpoint of an existing line can be determined quickly by opening the shortcut menu directly on the element

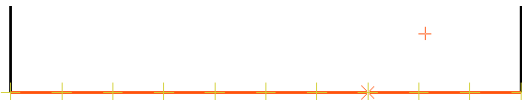
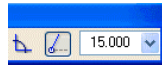


Fig.: division point

Setting a cursor snap angle and using drawing aids




When you draw linear elements (a wall or a line, for example), you can draw either freely or you can restrict the direction in which you draw to a specific angle. You can make this setting on the far right in the dialog line.



You can restrict movement to either horizontal/vertical (ortho constraint) or set a cursor snap angle of your choice. The current setting for the system angle is taken into account. For example, if the system angle is set to 30 °, then this is interpreted as being horizontal.

Note: If you have set a cursor snap angle, then this will have priority over any point snap settings you have made, as well as any other options you have selected on the shortcut menu. This means that only points in alignment with one of the set cursor snap angles will be snapped.

You can use the following options in the dialog line to restrict cursor movement to a specific direction or angle:



Icon	Function	Use
	No icon pressed in	The lines can be drawn at any angle. This is the default setting.
	Ortho constraint	The line can only be drawn at right angles to the current system angle.
	Cursor snap	The line can only be drawn at specific angles.
15.00	Cursor snap angle	Define the cursor snap angle here (only possible when  is enabled).

Using the bracket feature

With the aid of the bracket feature you can select several elements one after the other.

Using the bracket feature to select elements

Tip: You can also open/close these metaphorical brackets by right clicking in the workspace.




- Activate the brackets with  Bracket on the Filter Assistant toolbar.
- Click elements and/or open selection rectangles or fences.
- Press  Bracket to close the bracket feature.

Entering points relative to existing points

You can enter points and elements using coordinates relative to existing points.

All you need to do is point to an existing point and enter relative coordinates in the dialog line.

To enter points relative to existing points

- Move the crosshairs to the reference point.
The system snaps to this point and a temporary marker appears on it.
- Enter the relative coordinates for ,  and  in the dialog line (use the TAB key to toggle between the data entry boxes).
- Press ENTER to place the point.

Customizing options

You can adapt the options Allplan provides for entering and snapping points to your needs and requirements: all you need to do is click **Point Entry Options** on the shortcut menu.

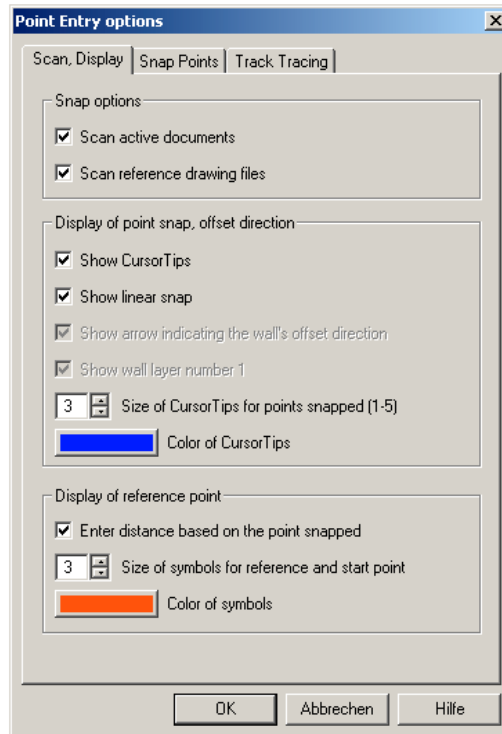




Fig.: point entry options

The following options are provided:

- **Enter distance based on the point snapped**
When you have enabled this option, the entries you make in the dialog line are based on the point snapped.
When this option not enabled, the following rules apply:
 - Entries in data entry boxes highlighted in yellow (relative to point snapped) are ignored.
 - The values entered for dX, dY or dZ are only applied when you have already placed a point.
 - If the values are set to 0, a point can be snapped. To place this point as it is, click it or press ENTER. You can also enable  **Offset point** on the shortcut menu. Now the offset you enter is based on the point snapped.
 - When you click  **Offset point** while no point is active, the entries you make in the dialog line are applied to the point snapped.

Default: enabled.

- **Size of symbols for reference and start point (1-5)**

This is where you define the size of the CursorTips indicating the reference and start points.

Default: 3

- **Color of symbols**

This is where you define the color for the CursorTips.

Default: red


Polyline entry tools

Tip: The easiest alternative is to enter a rectangle by setting two diagonally opposite points and then pressing ESC.

The general polyline input is used to enter polylines and polygonal-bounded areas. It is used by countless Allplan 2006 functions, e.g., when entering hatching, applying a fill or entering a room.

You can either enter the polyline from scratch using the drawing aids in the dialog line or on the shortcut menu, or you can utilize existing outlines or elements.

Basic polyline input rules


- Entering two points and pressing ESC automatically creates a rectangle.
- Polylines that have to be closed (e.g., for hatching), close automatically when you press ESC or when the last point coincides with the first.
- When you click an element, you can either define a point on the element or choose to use the entire element. When you click Options in the Input options, you can make additional settings.
- You can create areas composed of any number of areas by clicking Multi in the Input options and then using Plus and Minus to define whether the area is to be added or subtracted from the overall area.
- You can use  Outline Auto-Detect to quickly select closed outlines.


Using Track Lines

Track lines facilitate the intuitive design process and can save a lot of time and effort as you can bypass the process of drawing construction lines. By pointing to existing elements, this new feature allows you to sum up (add up) a maximum of five track points. These “collected” track points are assigned symbols and define the type of track lines the program displays.

Tip: The program marks the track points snapped by enclosing the corresponding symbols in rectangles.

Instead of pointing to an elements and waiting until the program automatically activates track tracing, you can also select

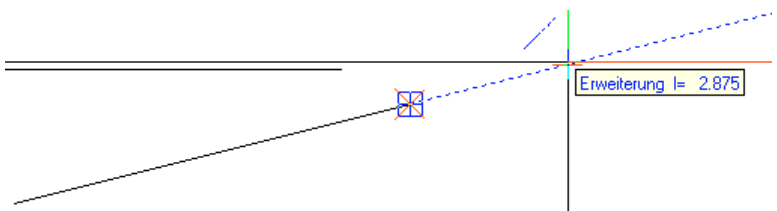
 **Track point** on the shortcut menu and explicitly place a track point.

 **Delete track points** lets you delete all the track points and start again.

Available track points and track lines

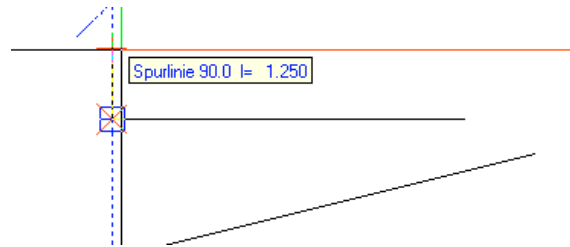
Extension

After activating a design tool, point to the start/end point of an element. When you move the crosshairs along the extension of the element, the program displays a track line stretching from this element. In the case of two track lines, you can also use the virtual points of intersection between these two lines.



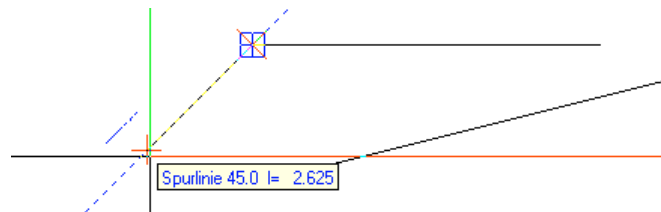
Orthogonal track lines

After activating a design tool, move the element in the preview roughly in the direction of the X or Y axis. The nearest horizontal or vertical track line is displayed.



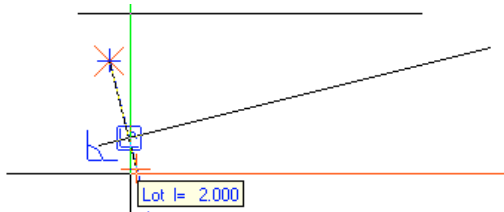
Polar track lines

The orthogonal track lines are complemented by polar track lines. After activating a design tool, position the element in the preview roughly at the cursor snap angle set for the polar track lines. The nearest track line matching this angle is displayed.



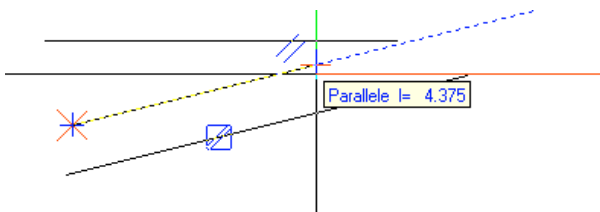
Perpendicular

After activating a design tool, point to an existing element roughly where the perpendicular is to be dropped. Wait until the program displays the appropriate symbol. When you move the crosshairs along the extension of the perpendicular, a track line appears. Now you can click a point on the element or track line or enter the length of the perpendicular in the dialog line.



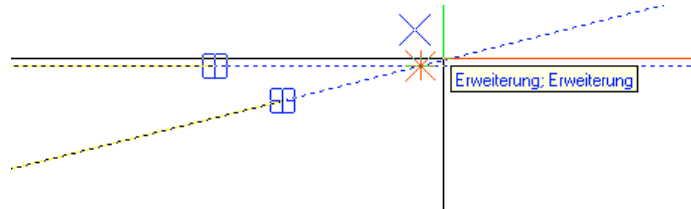
Parallel lines

After activating a design tool, point to a linear element between its endpoint and midpoint. Wait until the program automatically activates the track tracing feature (you can define a time limit in the **Point Entry Options, Track Tracing** tab) and shows the appropriate symbol; in other words, the program displays a parallel track line to assist you in the process of drawing the element. Now you can click a point on the track line or enter the length of the element in the dialog line.

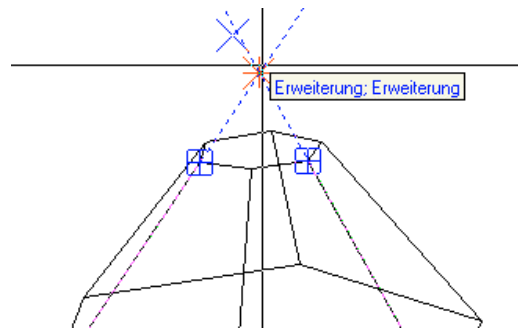


Assumed point of intersection

After activating a design tool, point to the start/end points of existing elements. Moving the cursor near the assumed point of intersection displays the extensions of the “collected” elements and the assumed point where these elements intersect.





Note: Track tracing can also be employed with 3D objects. The following illustration shows a truncated cone whose edges are extended to the virtual vertex.



Entering length values when working with track lines

Entering length values using the preview



Moving the preview of an element along a track line displays a ToolTip with the current length of the element. This length is a multiple of the value specified for the  Array length in the dialog line (even when  Array length is not active).

Entering length as numerical value in dialog line

- As long as the preview of an element has not snapped to a track line or point, the values you enter relate to the start point of the element in question.

You can enter the dimensions in the dialog line using

 X Coordinate,  Y Coordinate and  Z-Coordinate.

- As soon as the program has snapped to an existing point or track points, the dimensions relate to this point.
- When the program snaps to a track line, you can enter the dimensions in the dialog line using  Offset to reference point (starting point of element) and  Offset length (track line).

Customizing track lines

Tip: You can quickly enable and disable the track tracing feature by pressing the F11 key while you are entering elements.

You can adapt the options available for track tracing to your needs and requirements: activate a tool for creating elements and, on the shortcut menu, click **Point Entry Options**.

Open the **Track Tracing** tab. Now you can set general defaults for the track tracing feature. For example, you can disable this feature completely. You can also specify the time (in milliseconds) the program is to wait until it automatically activates track tracing.

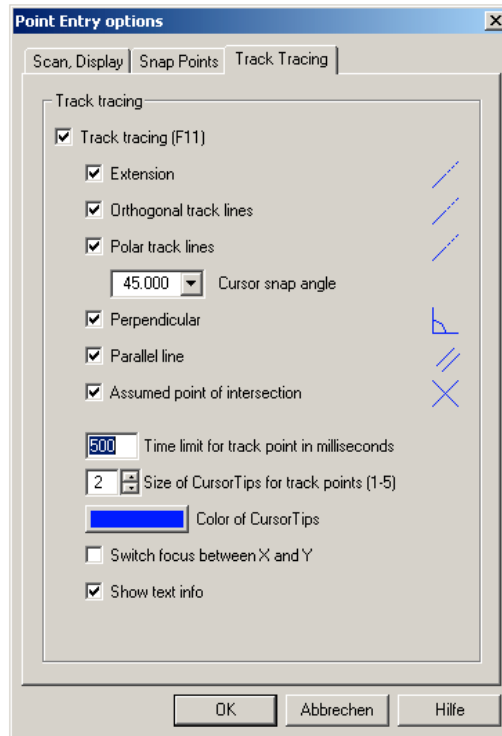



Fig.: customizing the track tracing feature

Applying Surface Elements






Hatching, pattern, fill, bitmap area

You can apply hatching, patterns or fills to areas in order to define different materials or to visually highlight areas. In addition, you can apply bitmaps to areas or use architectural surface styles for 2D areas (we will use the term 'surface element' to refer to the wide range of options provided by Allplan).






The library of hatching styles that ships with Allplan 2006 includes a wide range of hatching styles and patterns. However, you can also define your own hatching styles and patterns (click **Defaults** on the **Tools** menu) or modify those that come with the program. You can display the boundary of hatching, patterns and fills as a construction line by setting the appropriate option in  **Show/Hide**.

Areas where surface elements (e.g. hatching, patterns or fills) are to be applied are best entered using a standard polyline.

The following tools are available for entering filled areas:

Icon	Function	Use
	Hatching	You can use this tool to apply hatching to an area.
	Pattern	You can use this tool to apply a pattern to an area.
	Fill	You can use this tool to apply a color fill to an area.
	Bitmap Area	You can use this tool to place bitmaps on surfaces.
	Area Style	You can use this tool to apply architectural surface styles to 2D areas.

The following tools are available for modifying filled areas:

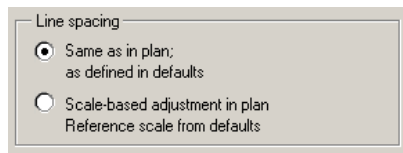
Icon	Function	Use
	Reshape Surface Element, Architectural Area	You can use this tool to add areas to hatching, patterns, fills, bitmaps or architectural elements (slabs, rooms, net stories, floors, ceilings, roof covering) or remove such areas.
	Split Surface Elements, Archit. Elements	You can use this tool to split hatching, patterns, fills, bitmaps and architectural elements (walls, columns, slabs, beams, upstands, rooms, net stories, floors, ceilings) into two parts. This can be useful if you need to split up the 3D plan for creating the plan or plot.
	Merge Surface Elements, Archit. Elements	You can use this tool to merge two areas of hatching, patterns, fills, bitmaps and architectural elements (walls, slabs, beams, upstands, rooms, net stories, floors and ceilings) to form a single element.
	Convert Surface Element	You can use this tool to convert surface elements (hatching, patterns, fills or bitmaps) to surface elements of the same or different type. You can also use the tool simply to modify the properties of a surface element.
	Stretch Entities	You can use this tool to modify the outline of filled areas.

Hatching and Reference Scale

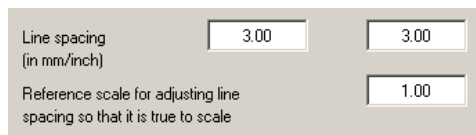
Whenever you apply hatching, you can specify whether the spacing between the hatching lines is to remain constant or change dynamically with the reference scale. This means that you can distinguish between hatching used to display real objects, and symbolic hatching, e.g., concrete hatching. Tiles should appear larger or smaller depending on the selected reference scale. Symbolic hatching, on the other hand, should have the same spacing between lines regardless of scale.

You can make this setting in two places

- In the hatching properties when you create an area with hatching: Here, you can specify whether the hatching is to adapt to the scale or remain constant, regardless of the scale.



- In hatching defaults: Here, you can set the spacing between hatching lines (for the **Scale-based adjustment in plan** setting) and the scale to which the line spacing is to apply. This setting also defines how component hatching behaves.



Note: When you change the defaults, all the areas where this hatching style has been applied also change.

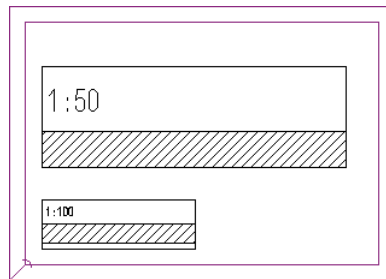
'Same as in plan' hatching setting

When you have enabled the **Same as in plan** option, the spacing between the hatching lines in layouts always remains constant, regardless of the scale. Components like walls are based on this setting when a value of 1 is set for the **Reference scale for adjusting line spacing** so that it is true to scale setting in the hatching defaults.

But the display of hatching styles in layouts differs from that in drawing files. The display in layouts is of relevance.

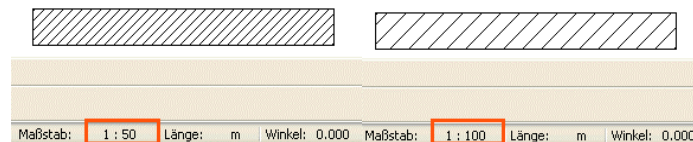
Display in layout

The spacing between the hatching lines is the same at 1:50 as well as at 1:100 but the number of lines doubles. The spacing is based on the value entered for the line spacing in the hatching defaults (regardless of the scale).



Display in document

As the number of hatching lines doubles, the display in drawing files changes associatively with the reference scale.



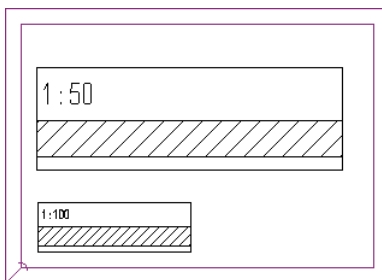
'Scale-based adjustment in plan' hatching setting

When you have enabled the **Scale-based adjustment in plan** setting, the spacing between the hatching lines changes associatively with the scale. Components like walls are based on this setting when a value > 1 is set for the **Reference scale for adjusting line spacing so that it is true to scale** setting in the hatching defaults.

But the display of hatching styles in layouts differs from that in drawing files. The display in layouts is of relevance.

Display in layout

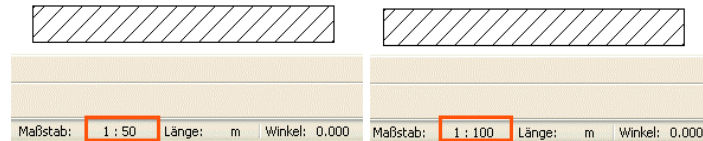
The spacing between the hatching lines is at 1:50 twice as large as at 1:100 but the number of lines remains constant. The spacing is based on the value entered for the line spacing in the hatching defaults and on the reference scale.



Example: You are using hatching 1 with the following settings: the line spacing is 3 mm and the 'Reference scale for adjusting line spacing so that it is true to scale' is set to 1:100. This hatching is created in the drawing file with the **Scale-based adjustment in plan** setting being enabled, and it is placed in the layout at a scale of 1:50. The spacing between the hatching lines in the layout is calculated according to the following formula: Line spacing (from defaults): reference scale x scale of layout; i.e. in this example: 3mm : 1/100 x 1/50 = 6mm. At a layout scale of 1:100, the line spacing is 3mm.

Display in document

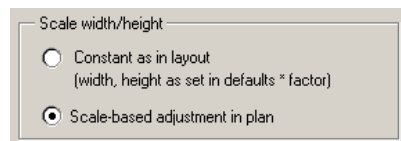
As the number of hatching lines remains constant, the display in the drawing file does not change when you set another reference scale.



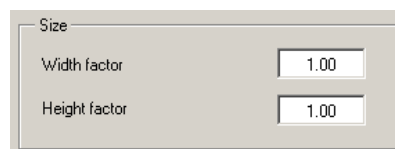
Pattern and Reference Scale

The size of a pattern or pattern element and its display at different reference scales depends on three factors:

- the height and width of a pattern element. These values are set in the pattern defaults (on the **Tools** menu – **Defaults** – **Pattern**).
- the **Scale-based adjustment in plan** and **Constant as in layout** options. You can make these settings in the pattern parameters (**Pattern tool- Properties**).



- the values for the height and width factor of the pattern. You can also enter these values in the pattern parameters.



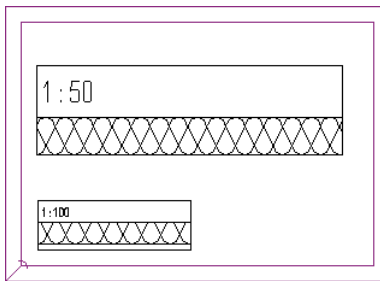
'Constant as in layout' pattern setting

When the **Constant as in layout** setting is enabled, the size of the pattern elements in layouts always remains constant, regardless of the scale used to place the layout elements.

But the display of patterns in layouts differs from that in drawing files. The display in layouts is of relevance.

Display in layout

The size of the pattern elements is the same at 1:50 as well as at 1:100 but the number of pattern elements doubles. The size is based on the value entered in the pattern defaults and on the width/height factor, which is defined in the pattern parameters.



Example: You are using pattern 301 and the height of one pattern element in the layout should be 10 mm. In the pattern defaults, a height of 100 mm is defined for pattern 301. You therefore need to enter a factor of 0.10 in the pattern parameters (pattern height x factor = height of one pattern element in the layout). This yields a height of 10 mm (100 mm x 0.10), regardless of the scale set.

Display in document

As the number of pattern elements doubles, the display in drawing files changes associatively with the reference scale.

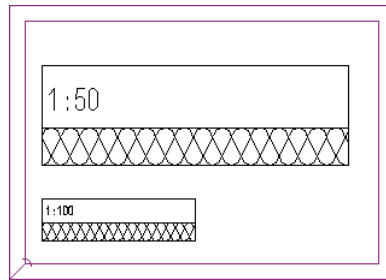
'Scale-based adjustment in plan' pattern setting

When the **Scale-based adjustment in plan** option is enabled, the size of the pattern elements in the layout changes associatively with the scale. Components like walls are based on this setting.

But the display of patterns in layouts differs from that in drawing files. The display in layouts is of relevance.

Display in layout

The size of the pattern elements is at 1:50 twice as large as at 1:100 but the number of pattern elements remains constant. The size of a single pattern element depends on the following settings: the value set in the pattern defaults, the height/width factor specified in the pattern parameters and the scale at which the layout element was placed.



Example: You are using pattern 301 and the height of one pattern element in the layout should be 10 mm. In the pattern defaults, a height of 100 mm is defined for pattern 301. You therefore need to enter a factor of 10 in the pattern parameters (height of a pattern element in the layout = pattern height defined in the defaults x factor x layout scale). At a scale of 1:100, the height is 10mm (100mm x 10 x 1/100); at a scale of 1:50, the height is 20mm.

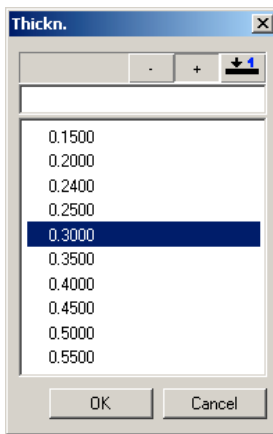
Display in document

As the number of pattern elements remains constant, the display in the drawing file does not change when you set another reference scale.


Working Efficiently Using Libraries, Favorites and Defaults

Default settings

You can save frequently used settings or values in dialog boxes as styles and retrieve these whenever they are needed. For example, you can save different wall thickness in the Wall dialog box.




Click  to add a new wall thickness value.

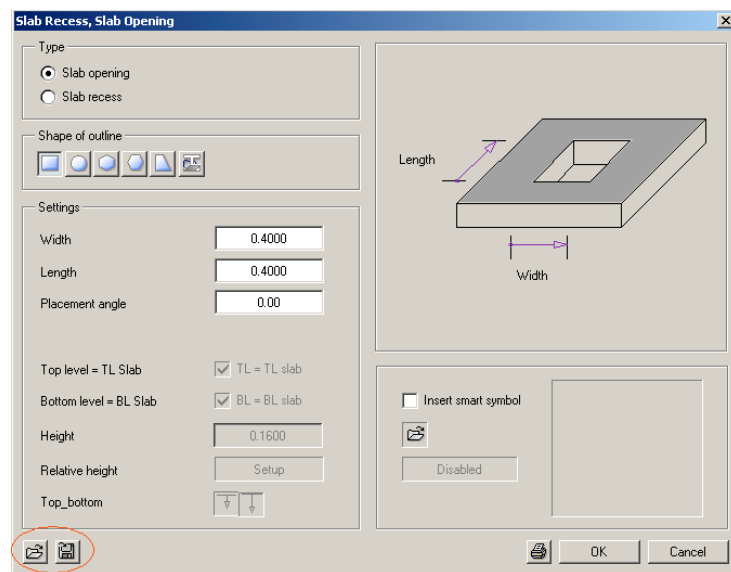
Click  to remove a wall thickness value.

Enter a value and click  to look for the wall thickness specified.


Saving components as favorites


You can define frequently used components as favorites (standard components) and store these in a component-specific library. This is especially useful if you are working in a team. The use of standard components not only means that they are readily available, but also reduces the risk of errors.

You can save walls, doors and windows as styles. You can even save dimension lines as favorite files. All you need to do is click  at bottom left in the component's property dialog. The example below shows the property dialog for a slab opening.



Note: The layer currently set is also saved. When you retrieve favorite files later, this layer is automatically set as the current layer.

Use  to save entire components as favorites. Favorite files are given element-specific or component-specific filename extensions.


Click  to retrieve favorite files (standard components).

Using symbols

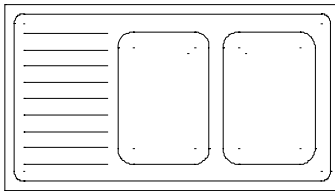
A symbol is essentially a file consisting of any number of design entities. Symbols can be used repeatedly within a drawing. The size of a symbol is practically unlimited. You can even save an entire drawing file as a symbol.

The following tools on the **Standard** toolbar can be used to save and retrieve symbols:

 **Get from Library**

 **Write to Library**

Allplan 2006 ships with a set of basic symbols. However, you can also create your own symbols or purchase various symbol catalogs from Nemetschek.



Symbols provide the following advantages:

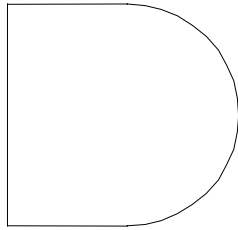
- You can create a library of symbols that contains frequently used components. Instead of drawing the component from scratch each time, just retrieve the symbol from the symbol file.
- Symbols are placed as an entity group. This means that they can be addressed (click with the middle and left mouse buttons) and modified as a single entity. You can also modify each individual element separately.
- You can also access the extensive symbol catalogs offered by Nemetschek. A lot of the symbols offered here will display with different levels of detail, depending on the scale that is set.

Symbols automatically adapt to the reference scale. If your symbols include text, then this, too, can be made to change with the reference scale.

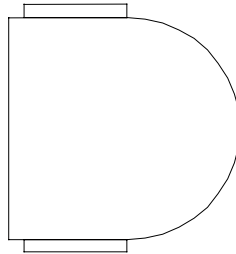
Using smart symbols

A smart symbol is an intelligent symbol whose appearance changes dynamically with the reference scale and view. A smart symbol is composed of several display foils. One foil might contain a 2D representation of an element, while another might include the same element in 3D. Yet another foil can contain a simple representation of the element at 1:100, while another could show a complex representation of the element at 1:10.

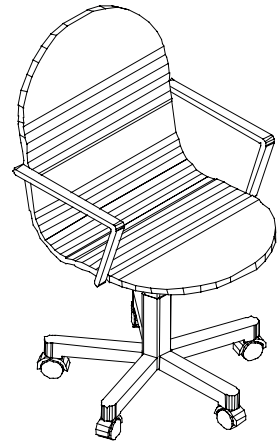
A smart symbol can have a very simple or very complex structure.



Display at a
scale of 1:200





Display at a
scale of 1:100



Displayed in isometric
view

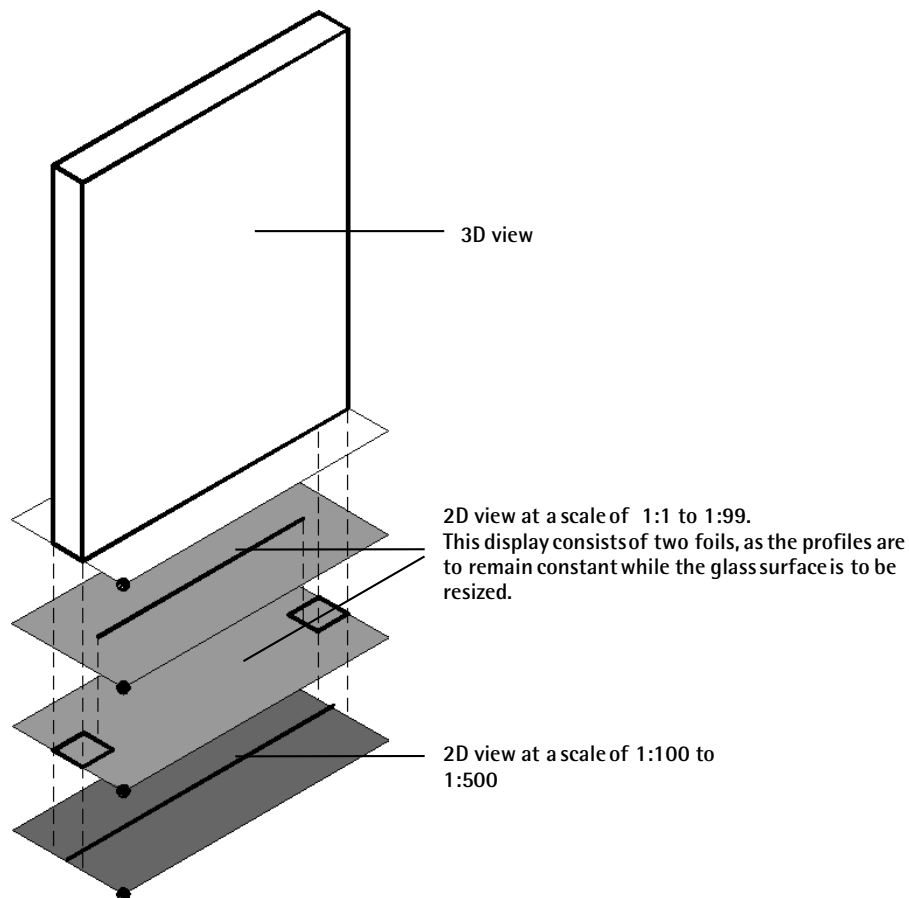
Properties of smart symbols

- Smart symbols take up less space. Once you have placed a smart symbol, all the other instances of the smart symbol simply reference the first instance. This means that, regardless of how many times you actually place a smart symbol, only the disk space for a single instance is required (as opposed to symbols).
- Using  **Modify Display Parameters** to modify an instance of a smart symbol automatically modifies all the instances of the smart symbol in the same drawing file.
- After you have placed a smart symbol, it no longer references the smart symbol stored in the catalog. This means that overwriting a smart symbol in the catalog with another smart symbol will not affect the instances of the original that have already been placed. If you have the **Smart Symbols** module, you can also use  **Update Placed Smart Symbols Based on Catalog** to update placed instances of the smart symbol.
- Checking for design alternatives is drastically simplified. With smart symbols, you can replace all instances of a smart symbol or just a single instance.
- In conjunction with the **Object Manager** module, smart symbols can be assigned attributes (e.g. item number, price) for subsequent analyses in lists and schedules.

Components of a Smart Symbol

A smart symbol consists of two- and three-dimensional design entities. Allplan 2006 uses the definition and assignment of the individual foils to reassemble the smart symbol for different scales and display modes. The exact position of the foils is preserved, even when you resize a smart symbol. This is made possible by setting a reference point and so-called resizing points.

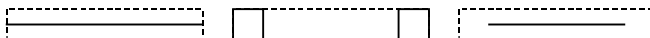
When you design a smart symbol, you can define areas of the design entity as being dynamic (resizable) or static. A good example is a window frame whose sections remain constant - as opposed to the glass surface whose height and width needs to be variable.




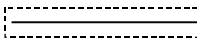
General approach for defining smart symbols

Follow the steps below to define a smart symbol

- 1 Draw all the elements that are to make up the smart symbol. If the smart symbol is to consist of several congruent foils for different reference scales and/or views, place the elements that belong together beside or below each other in the workspace; this will facilitate the process of selecting foils and setting reference points.

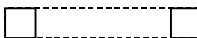


- 2 Activate the  Smart Symbol tool (Create menu → Bonus Tools → Smart Symbols), select the catalog where the smart symbol is to be stored, enter a name for it and assign parameters.
- 3 Select the elements to be placed on the first smart symbol foil.

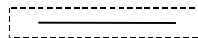


Foil 1

- 4 Define the other foils.
Every area that is subject to a separate resizing definition gets its own foil.




Foil 2



Foil 3

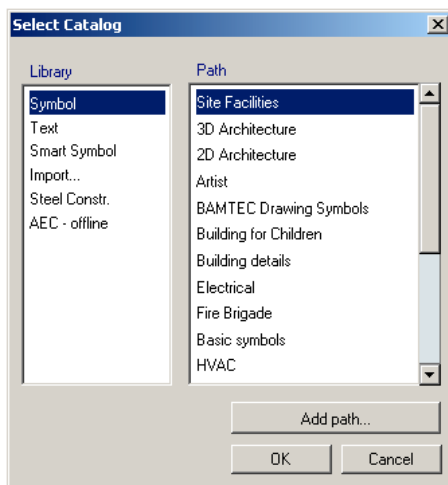
- 5 Define the smart symbol's MinMax box.

Use  Get from Library (Standard toolbar) to insert the smart symbol in the workspace.

Paths in Allplan 2006

When saving or retrieving standard components, symbols and smart symbols, the system will prompt you to specify a path for the files in question. The example below shows the dialog that is displayed when saving a symbol.

The distinction between the Office, Private and External paths is particularly important in a network environment. However, you can also structure your data if you are using a standalone version.



Path	Meaning
Office	The files in this folder are available to all users in the network. By using an office standard, you ensure that the plans in your office have a uniform appearance. The office standard can only be modified by the system administrator.
Private	The files in this folder are only available to one specific user.
Project	The files in this folder are only available in one specific project.
External data buffer	The files in this path are for backing up or exchanging data.
Your own path	When saving or retrieving symbols or smart symbols, you can define your own paths and save them under a name of your choice by clicking Add Folder....

Data Exchange with Other Programs

Due to many different operating systems and data formats exchanging data is not as simple as it may seem at first glance. The data you want to exchange has to be adjusted to the other CAD system using interfaces. If your design partners also work with Allplan 2006, the time and effort spent exchanging data will be reduced considerably. It is nevertheless advisable to agree on certain conventions with the person with whom you are exchanging data. You should therefore contact your data exchange partner to find out the following:

- Which operating system was used to create the data?
(Windows 2000, Windows XP)
- Which version was used for the design?
- What was backed up (project, drawing file, ...)?
- Is the data compressed and which compression utility was used?
It is advisable to exchange self-decompressing files.
- Is the design in 2D or 3D and which Allplan 2006 modules were used to create the design?

File types

With the ODX interfaces you can convert files from and to a large number of different formats. The following overview shows which file types can be exported and imported. The file types that are actually available to you depend on the configuration you have purchased.

The following file types are provided:

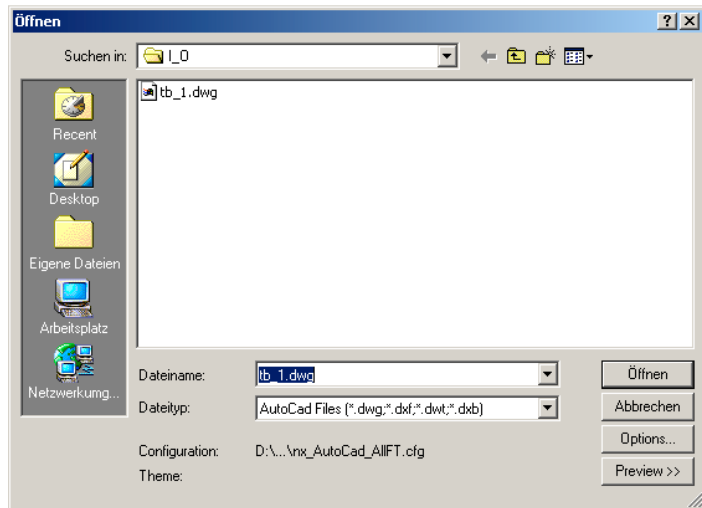
- AutoCAD files of V12, 13, 14, 2000, 2002, 2004 in the following formats: .dwf, .dwg, .dwt, .dxb, .dxf
Note: To import volumetric solids, you need to select the AutoCAD 2004 file type even when the AutoCAD file itself is from an earlier version.
- MicroStation files (.dgn)
- Allklima files (.h1s)
- HPGL2 files (for import only)
- Spirit files (for import only, conditions).
- SVG files (for export only)
- ODX batch files (.ncb) See Using batch files

The conversion process – important steps

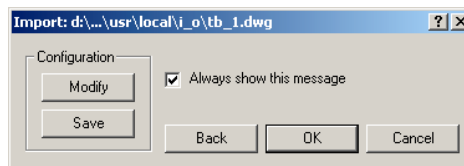
This section provides an overview of the conversion process (when importing data, for example).

To convert files

- 1 Start the importing process by clicking  **Import**.




- 2 In the **Open** dialog box, select a file type, directory and the file(s) you want to convert.
- 3 Click **Open**.
Allplan 2006 starts the automatic assignment.



- 4 Start the conversion by clicking **OK**.
Note: To check or modify the assignments, click **Change**.
- 5 Then check the log file.

Importing files with large coordinates

DXF and DWG files can contain elements with very large coordinates; this is especially true in the case of files with country coordinates. When importing a file like that, you get the following warning in the log file: **Coordinates exceed 5,000 m**. This may lead to problems if you want to edit the imported files in Allplan 2006. Allplan provides several options for importing files with large coordinates so that they can be used without any problem:

- Enable the **Optimize working with large coordinates** check box in the  **Global Options**, **Miscellaneous** tab. The program internally optimizes the coordinates of the elements and resets them to their original values after each action you perform.
- Set an offset in the options for the **Advanced Draft** module. The offset that is set is automatically taken into account when exporting and importing.
- When importing, enable the **Adjust center of gravity as: Offset** check box in the **Options**. The system automatically sets an offset in the options for the **Advanced Draft** module. Consequently, the center of the file (= center of the min-max-box) is set to the origin of the coordinate system. This option is not available when you have already specified an offset.

Note: The offset is entered automatically and is always valid for the whole project. Setting an offset causes all the coordinates of existing drawing files in the project in question to change.

- When importing, enable the **Adjust center of gravity as: Origin** check box in the **Options**. Thus, the center of the file is moved to the origin of Allplan's coordinate system.
- When importing, you can specify an additional offset in the **Options**. This is used in addition to the offset that is set in the options in the **Advanced Draft** module. Pay attention to the direction of conversion when setting an offset:
 - Negative value for import
 - Positive values for export
- Import the data and use the **Move** tool provided in Allplan 2006 to move it towards the origin.

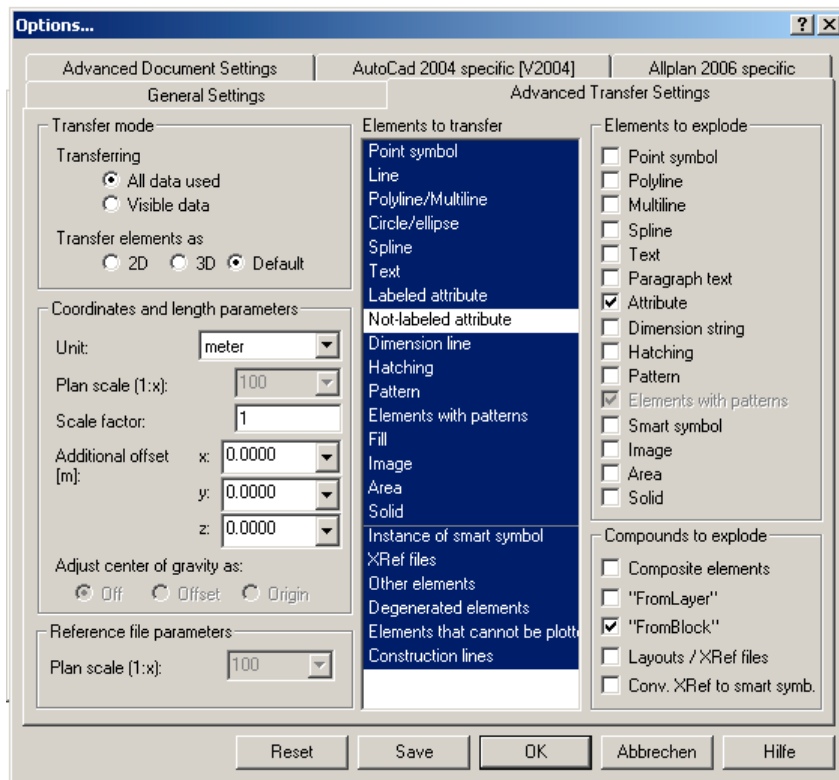
Important: an offset is usually the better solution:

- Point coordinates are measured correctly and they are not changed. This is particularly important when exporting the data again.
- The offset that is set is automatically taken into account when exporting and importing.
- Moving data always changes the coordinates themselves. You should **only** use this option when you do not need to export the data again.

Adjusting data

Options dialog box

You can make configuration settings in the **Interfaces Options (ODX)** dialog box. For example, you can define the destination scale and exclude specific elements from the transfer operation.



Advanced information on the options provided for adjusting data during import and export can be found in the Online help for Allplan 2006 under “The Options... dialog box”.

Adjusting units

During conversion, there are three parameters that control how the units in the source system are adjusted to the units in the destination system. Please note that it may sometimes be impossible to modify the **Unit** and **Plan scale** parameters, depending on the source and destination system. With the **Scale factor**, however, the units can always be adjusted.

The parameters can be set in the **Options** dialog box, **Coordinates and length parameters** area.

Coordinates and length parameters

Unit: meter

Plan scale (1:x): 100

Scale factor: 1

Additional offset [m]:

x: 0.0000

y: 0.0000

z: 0.0000

Adjust center of gravity as:

Off Offset Origin

Unit

Depending on whether your colleague is using m, cm or mm, they will enter 1.0, 100.0 or 1000.0 when drawing a one-meter line. With the **Unit** parameter, you indicate to the program whether the value is to be interpreted as mm, cm, dm, etc.

During import: This is where you set the unit with which the file being converted (the source file) was created.

During export: This is where you set the unit with which the exported file (the destination file) is to be further edited.

Contact the person with whom you are exchanging data to find out which unit they are using in their files. The reason for this is that in the case of coordinate and length entries, only the figure is present and not the unit. In DWG/DXF files, the elements can be stored in any unit.

Note: In some systems, the unit in which lengths and coordinates are saved is predefined and must therefore not be altered here. In Allplan 2006, lengths and coordinates are always saved as mm, regardless which unit was used when the data was entered. To account for different units, use the **Scale factor** parameter (see below).

Note: The unit the destination system saves in is always predefined and is based on the destination system in question. For conversions to Allplan 2006, for example, data is always saved using the unit mm; for conversions to AutoCAD the unit is always m.

Plan scale

This is where you set the reference scale with which the file being converted was created. The plan scale controls text size, text spacing, the size of point symbols, linetype definitions and hatching definitions.

Note: Depending on the source and destination system, it is not always possible to change the plan scale. For example, when exporting from Allplan 2006, the current drawing file scale is displayed and cannot be altered.

Scale factor

You can use this to enlarge (>1) or reduce (<1) coordinates and length values in the data being converted. This parameter is always available.

Using assignments

Assignments let you define how properties in the source system are mapped in the destination system. For example, you can define the arrangement on layers or the assignment of colors and linetypes.

Allplan 2006 automatically assigns properties in the source system to properties in the destination system. If you have activated the **Allow incomplete assignments** option in the **Source File for Conversion** dialog box, not all of the properties have to be assigned in order for the transfer to take place. If you want to change an assignment manually, you can do so in the **Configuration for Conversion** dialog box. To activate the dialog box, click **Change** in the **Import** or **Export** dialog box.

Properties that are unassigned are marked by an asterisk (*) beside the tab name. Click the tab.

You can quickly see which properties have not been assigned in this tab by activating **Show unassigned only**.

The assignments can be saved in configuration files. The program ships with standard configuration files for the most important systems. You can also create your own configuration files, however. For more information see the section entitled "Using configuration files".

Using configuration files

Configuration files contain the assignments between source system and destination system properties. The program ships with standard configuration files. You can also create your own configuration files, however.

Standard configuration files

The program comes with standard configuration files for the most important systems. The standard configuration files are files tailored to the conversion requirements of the systems involved. They are defined by special names that indicate the direction of conversion and the systems. (For example, the standard configuration file for conversion from Allplan 2006 to AutoCAD is:

```
nx_ALLFT_AutoCAD.CFG).
```

But you can also create your own configuration files.

Exporting bitmaps and scanned images

When exporting bitmaps, they are either resolved and transferred or not resolved and transferred (as complex) elements. Color bitmaps can only be transferred as complex elements. Bitmaps that are not resolved are created as a `.bmp` file and have to be transferred with the `.dxf/.dwg/.dgn` file. When you re-import the `.bmp` files into Allplan 2006, they are imported as bitmaps. Bitmaps which are inserted as bitmap links are not exported.

Bitmaps can be transferred in an exploded manner or as complex elements:

- **Resolved:** the pixels are exploded into vectors. Depending on the size of the bitmap, this may produce large volumes of data and thus result in slower transmission speeds. Please note that only monochrome bitmaps can be transferred in this manner.
- **Not resolved:** bitmaps are converted to `.bmp` files. The names of the `.bmp` files are listed in the log file as these files have to be included when exchanging data. This option facilitates the transfer of color bitmaps.

- The manner in which bitmaps are transferred during export depends on the setting you make for the **Image** option in the **Compounds to explode** area in the **Options** dialog box.

Note: bitmap files can only be exported to `.dgn` in an exploded manner; i.e. you cannot export scanned images.

The following properties of the bitmap file are analyzed during transfer:

- The size and angle of rotation
- The transparency setting
- The bitmap file itself


The following properties are not taken into account:

- The color of transparency and the tolerance of the color
- The shearing angle
- The colors of bitmaps cannot be assigned. The original colors are always used.

Editing imported data

The modules that are available for editing the imported data depends on the data type.

2D data


You can edit 2D data in the  **Draft** module without having to convert the data first. Set an appropriate scale and modify, if necessary, the pen and line settings. You can add or delete individual elements like sections, details, hatching, dimensions and text. This way, you can quickly enhance your design with the minimum of effort.

3D data

3D data can be edited in the following ways:

- You can add 2D designs; it is advisable to use a drawing file.
- You can use the data and add elements using the **3D Modeling** and/or **Walls, Openings, Components** modules.
- You can create any sections, views or even partial sections using the **Shell** module.
- You can convert the 3D data to 2D. The three-dimensional information (height = Z axis) is lost in the process.

General information on exporting layouts


In the Plot Layout module, you can use the  **Export Layouts** tool to export a layout or the documents in a layout as a DXF/DWG/DGN file. Two options are available:

- **Resolve and transfer layouts:** when you choose this method, the link between the layout and the documents is cleared and all data is written to a single file. Select this option if the layout is to look similar in AutoCad.
- **Transfer layouts as complex elements (not resolved):** when you choose this method, the link between the layout and the documents is retained. If you export to model space, separate files are created for the layout itself and for each document placed in the layout. When you export to paper space, a single file is created. Select this option if you want to edit the layout in AutoCad.

To select an option, click **Options...**, open the **Advanced Transfer Settings** tab and enable or disable the **Layouts/ XRef Files** and/or **Convert XRef to smart symbol** options in the **Compounds to explode** area.

The following table shows the most important differences between these two methods.

	Resolve and export layouts	Export layouts as complex elements
Created file(s)	<p>A single file.</p> <p>If Layouts / XRef Files is enabled: Each document becomes a group.</p> <p>If Convert XRef to smart symbol is enabled: each document becomes a block.</p>	<p>Export to model space: a separate file is created as an external reference (Xref) for each document and a main document is created for the layout. The individual documents are always created as .dwg-format files.</p> <p>Export to paper space: A single file; each document becomes a separate viewport.</p>
Resolve elements (in documents)	Always	Depending on the setting in the Elements to explode area
Resolve elements (in the layout)	Depending on the setting in the Elements to explode area	Depending on the setting in the Elements to explode area

	Resolve and export layouts	Export layouts as complex elements
Filter elements (in documents)	Disable the corresponding options in the  Plot Layouts tool, Plot elements area and enable the Visible data option for the export.	Depending on the setting in the Elements to transfer area
Filter elements (in the layout)	Depending on the setting in the Elements to transfer area	Depending on the setting in the Elements to transfer area
Consider clip boundaries (using layout windows, for example)	Yes (regardless of the setting made in the Transfer area) If Convert XRef to smart symbol is enabled: if a document is placed several times with different clip boundaries, it may happen that the document is always placed in a clipped or unclipped state in AutoCad.	Export to model space: No Export to paper space: yes
Paper space – model space	Model space	Depending on the setting made on the AutoCad Specific tab.

Printing and Plotting



Requirements

Before you start printing and plotting, please check that the relevant output device has been correctly installed and configured. If you are working in a network, you can use any device connected to a remote machine (assuming it is configured correctly).

The output device to be used needs to be connected and installed using Windows Print Manager. In a network, install the device on the computer to which it is connected and then share it.



For more detailed information, please consult the documentation that came with your printer/plotter and/or operating system.


Printing the contents of the display – print preview

The  Print Preview shows the view displayed in the currently active window (design or Animation window) as it will appear in the printout. The  Print Preview lets you define margins, add headers and footers, set a scale and rotate the contents. The paper size depends on the current printer settings and can be changed in the print preview.

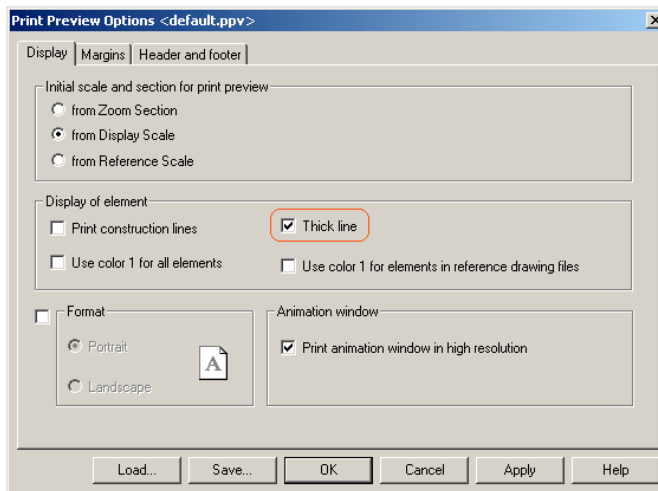
This tool works with all the printers and plotters for which you have installed and configured a Windows printer driver.




To print the contents of the display

- Activate all the documents you want to print. All the layers you need are set to visible.
- 1 Click  Print Preview (Standard toolbar).
- 2 Click  Print Preview Options, select the Display tab and enable the Thick line option. With this option, lines print out with their actual extents.

Tip: To print more screen contents, click  **Print** on the **Standard** toolbar.


This prints using the most recent settings.



- 3 Click  **Set Up Printer** and select the printer.
- 4 Display the section you want to print using , for example.
- 5 Click  **Print**.
- 6 Press ESC to quit the print preview.

Print preview tools

Zoom


Select  **Zoom** and click in the workspace. The display is enlarged. This function works at two levels: the document displayed on screen is enlarged mouse click by mouse click. Clicking a third time restores the original size of the document. These changes only affect the display on screen. They have no effect on the size of the printout. To actually change the size of the printout, use the settings for the scale.


Show Entire Image

Displays the elements in their entirety and adjusts them to the maximum printable area of the paper.

Zoom Section

Zooms in on a section by pressing and holding down the left mouse button and opening up a selection rectangle.

 **Move Image (in normal viewports only)**

Moves the elements displayed. Select  **Pan** and hold down the mouse button and click the start and end point for the move. You can also move the elements by pressing and holding down the middle mouse button and then dragging. Double-clicking with the middle mouse button moves the elements back to their original position.

 **Rotate**

Rotates the preview by 90° in a counter-clockwise direction.

Scale

Defines the scale at which the elements are displayed. To enter a scale, click in the field, specify a scale (all you need to do is enter a value, 33, for example) and press ENTER to confirm.

 **Margins**

Displays all margins as lines. You can move these lines by dragging and dropping them - this way, you can increase or reduce the margins.

 **Print Preview Options**

Defines options for the print preview in a dialog box.

 **Print**

Prints out the document displayed on screen. The printer selected in **Set up printer** is used.


 **Set Up Printer**

Use this to select and configure a printer. The first time you open the print preview, the standard Windows printer is used.

 **Help**

Provides help on the print preview.

 **Close**

Click  **Close** to exit the print preview and to return to the usual workspace. You can also press ESC to quit the print preview.

Print preview options

The **Print Preview Options** dialog box lets you define how elements appear in printouts. In detail, you can make default settings, set the

width of the margins and specify the width and contents of the header and footer. You can save the print preview options and load options you have already saved.

Display tab

In the **Display** tab, you can define how the contents of the print preview appear in the printout.

Initial scale and section for print preview

You can use this to specify which scale and view are to be used to start the print preview. This setting only applies the next time you activate the **Print Preview** tool.

Print construction lines

Enable the **Print construction line** check box if you want elements which are created as construction lines to appear in printouts.


Thick line

When the **Thick line** options is active, lines print out with their actual extents. Otherwise, lines are drawn with the same, thin line.

Use color 1 for all elements

When you enable the **Use color 1 for all elements** check box, all the elements appear in black. When you use a color printer, the colors print out as they are currently displayed on screen.

Use color 1 for elements in reference drawing files

When this option is active, all the elements in reference drawing files appear in black. This applies regardless whether the **Use the same color for elements in reference drawing files** option (in  **Global Options**) is enabled or not. Otherwise, the colors of elements in reference drawing files are printed out as they appear on screen (provided you are using a color printer).

Format

When you enable the **Format** check box, you can choose between **Portrait** and **Landscape**.

Print animation window in high resolution

Please note the following:

- You should only enable this check box if your computer is equipped with a fast processor and enough RAM. In addition, check that your printer has enough memory, too.
- You should disable this check box if printing is very slow and the result does not suit your requirements.

Margins tab

On the **Margins** tab, you can define the width of the margins and of the header and footer. All values are entered in **mm**. In addition, you can specify where the screen contents are displayed after starting the print preview. You do not need to open the **Print Preview Options** dialog box if you want to change the width of the margins. All you need to do is display the margins by clicking **Margins** and change their width by dragging and dropping them.

Left, Right, Top, Bottom

Use this to set the width of the margins.

Header, Footer

This is where you define the distance of the header and footer from the upper and lower page boundaries.

Default position

Use this to specify where the screen contents are displayed after starting the print preview.

- **Bottom left:** the screen contents are displayed at bottom left.
- **Centered:** the screen contents are centered.
- **Current view:** the screen contents are displayed as they currently appear in Allplan 2006.

Show margins

When you activate this check box, a border indicating the margins and the header and footer is applied to the printout.

Large icons

When you enable this check box, large icons are displayed.

Reset

This button resets the values in this dialog box to their defaults. The default values are:

Left=0, Right=0, Top=0, Bottom=0, Header=10, Footer=10.

In addition, the default position is restored.

Header and footer tab

On the **Header and footer** tab, you can define the text which is to appear in the header and/or footer. You can enter any text in the data entry. You can also insert Allplan 2006 attributes (project name, drawing name, office name, date etc.). In addition, you can add bitmaps (e.g. company logo).

Text entry box

Use this to enter text, which can consist of several lines. The text is cut when it exceeds the maximum width or height of the header/footer.

Font...

Use this to set a font and formatting (e.g. font and size) for the header and/or footer. You can use all the TrueType fonts installed on your system. The formatting applies to the entire header and/or footer.

Alignment of text

Use this to specify how the text is to be aligned in the horizontal direction. You cannot make any settings for the vertical direction. The setting you make here does not apply to bitmaps.

Bitmap

This opens the Associate with bitmap dialog box, in which you can add a bitmap (e.g. a company logo) as a .bmp-format file to the header or footer or remove a bitmap you have already inserted. The bitmap is resized so that it fits in the header and/or footer.

Attributes

This is where you can select an Allplan 2006 attribute and insert it in the header or footer by double-clicking. The attribute is inserted at the current position of the cursor. To delete an attribute you have already inserted, select it in the text field and press DEL.

Note: You can define the number of decimal places for the Scale attribute. You can enter up to nine decimal places.

For two decimal places, enter the following:

```
&t[scale,2]
```

When you do not enter anything, no decimal places are displayed.

Show header and footer

Use this check box to define whether the contents of the header and footer are displayed and printed out or not.







Assembling and printing out layouts

In the Plot Layout module, you can set up layouts using documents and filesets prior to plotting. You can create up to 3000 layouts per project. When you switch to the module, the sheet on which you will assemble the layout is displayed, as well as the printable area of the sheet (delimited by a border in construction line format). The exterior boundary defines the size of the selected paper, while the inner boundary defines the printable area (paper size minus device boundaries). For more information, see Components of a Layout.

This sheet is where you place the documents and filesets. You do not place actual documents; rather, a reference to the document (its number) is placed. If, for some reason, you move one of these files to a new number prior to plotting, you will have to delete the old number in the list and get the new one using Layout Element.

You cannot edit the data in documents in the Plot Layout module. However, you can place text, dimension lines and primitives in the layout. These elements exist in the layout only and not in the documents. To modify data, switch back to document edit mode.



Procedure:

- 1 Use  Layout Editor (Standard toolbar) to switch to the Plot Layout module.
- 2 Use  Layout Border to position the border of the layout within the inner boundary of the layout sheet.
- 3 Use  Layout Element or  NDW Layout Element to place documents and filesets within the layout border.
- 4 Use  Label to place a label (a title block, for example).
- 5 Place text, dimension lines and primitives in the layout. (This is optional.)
- 6 Use  Plot Layouts to print the plan.
You can also select the output device and the paper size here.

Note: It is advisable to save the label using a 1:1 reference scale.

Nemetschek drivers and Windows drivers

In the Plot Layout module, either Windows drivers or Nemetschek drivers can be used for printing and plotting. You need to use

Windows drivers for printing using the  Print Preview or the  Print tools as well as for printing layouts containing "new" element types (OLE objects, bitmaps, fills with gradients and/or transparency).

It is advisable to use Windows drivers for printing and HPGL2 drivers for plotting.

Windows drivers

If you are using Windows drivers, you can access any plotter or printer that has been configured under Windows just as you would from any other Windows application. This means that the output devices can be selected directly in Allplan 2006 and you can make printer and document settings there, too.

When you use HP DesignJets and compatible printers, raster drivers can be purchased for printing out large-format and complex layouts. As the "new" element types, which can only be output using Windows drivers, are being used increasingly, Windows drivers are becoming more and more important.

Nemetschek output channels

If you are using Nemetschek drivers, you can use the output channels defined in the Services. At least one output channel needs to have been defined in the Services application.

With Nemetschek drivers, you can continue to use old plotters and printers for which Windows drivers are not available.

Using Nemetschek raster drivers

This option is only available when you are using Windows drivers. For HP DesignJet printers, Allplan 2006 provides raster drivers that support Hewlett Packard's (HP's) printer language called RTL (Raster Transfer Language).

These printer drivers are suitable for large-format output of complex drawings and layouts as they have the following advantages: they speed up the printing process, the quality of the output is high and, last but not least, they are very reliable. In addition, these drivers can always be used for printing (as opposed to Windows drivers).

To be able to use a raster driver, a Windows printer driver of the same type must always be installed.

For performance reasons, it is advisable to address a printer in the network via HP's TCP/IP protocol, which facilitates faster printing speeds than the "normal" IP address.

The easiest method for installing with HP's TCP/IP port is to use HP's Install Network Printer Wizard, which can be found on the Internet: http://h20000.www2.hp.com/bizsupport/TechSupport/DriverDownload.jsp?locale=en_US&taskId=135&prodSeriesId=27908&prodTypeId=18972&tpnameOID=19656&lang=German

When you have selected a raster driver, the Windows printer driver is no longer used to create the output data for the printer. But it is still used to query the properties of the printer. These include paper size, print resolution, print quality and hardware interfaces.

To be able to use the Nemetschek raster driver, you need to associate it with an existing Windows printer driver.

This can only be done with devices of the same type. For example, it makes sense to associate a "HP DesignJet 800" Windows driver with the Allplan "HP-RTL DesignJet 500/800" raster driver. It would thus be senseless to associate an Epson Stylus Windows driver with the Allplan "HP-RTL DesignJet 500/800" raster driver.

You can set the properties of the Nemetschek raster driver by clicking the button for the printer and then **Properties**. The Allplan 2006 Help system includes detailed information on these parameters.

User-defined form size

If you are using the raster driver, you cannot define a custom form size. But if you still want to enter user-defined values for the form size, the following options are provided:

- Click **Start (→ Control Panel) → Printers and Faxes**. Click the driver you have installed using HP's Install Network Printer Wizard with the right mouse button and, on the shortcut menu, click **Printing Preferences...** Select the **Paper/Quality** tab, click the **Custom...** button and define the form size to suit your own needs and requirements.
- Disable the raster driver, click the button for the printer and then click **Properties**. Select the **Paper/Quality** tab and define the form size to suit your own needs and requirements. Then enable the raster driver again.

Tip: It is advisable to use the first option as you do not need to switch to a different driver. In addition, the user-defined form size is not lost if the driver is replaced by a newer version. You do not need to install the printer driver (latest version!) *locally* prior to activating the Wizard! Then start Setup and select the local printer driver.

Differences in color output between raster drivers and Windows drivers

As raster drivers are based on a different technology, there are some differences in color output between layouts created using Windows drivers and layouts printed out with RTL drivers.

As experience has shown, the colors in printouts created with raster drivers are darker or more intense than the colors in printouts generated using Windows drivers or Nemetschek output channels. You can make adjustments in the raster driver using gamma correction.

The aim is to achieve the best possible results by using the output option best suited to the task at hand:

- Nemetschek vector drivers are particularly appropriate for vector drawings.
- When printing out simple data, it is best to use Windows drivers.
- Nemetschek raster drivers are especially suitable for printing out different types of complex data.

Depending on the contents you want to print out, it can happen that Windows drivers may be faster than Nemetschek raster drivers.

Sequence in which elements print



A distinction has to be made here between the sequence in which elements in a document are printed out and the sequence in which documents and other elements in the layout are printed out. Settings you make on the plotter or in the Windows driver also have effects.

Sequence within a document

- Sequence in which elements are created/modified: by default, elements are drawn based on the sequence in which they were created or modified. The element you created or modified last is always on top and hides all the other elements.

Tip: To bring an element to the top: move the element and specify the same point for **from point** and **to point**. The element is then 're-created' and is on top of the other elements.






- Sequence in which elements are displayed: the sequence in which elements are displayed is entered as a value between -15 and +16. This value controls how elements are displayed on screen: the element to which you have assigned the highest value is displayed on top of all the other elements. If several elements have the same value, they are displayed based on the sequence in which they were created or modified. Surface elements can generally be placed in the background.

New elements are assigned a fixed default value that you can define by selecting **Tools** →  **Options** → **Global Options** → **Entry** → **Sequence...** To modify the sequence in which elements are displayed, click an element with the right mouse button, and, on the shortcut menu, choose **Format Properties** → **Sequence** or select the **Edit** menu and click  **Modify Format Properties** → **Sequence**.


Elements from V2003 with the **Always on Top** format property are given a value of +12.

- Surface elements (hatching, patterns, fills, bitmaps, OLE elements, XRefs): you can specify whether surface elements behave like other elements (i.e. printing based on creation sequence or display sequence) or whether they are to stay in the background. In the latter case, the creation or display sequence defined only governs the sequence in which the surface elements are displayed among themselves.

To print surface elements in the background and to have them hidden (covered) by design entities, make the following settings:

- Printing in the Plot Layout module: activate the **Surface elements in background** of each document option in the  Plot Layouts tool, Selection tab.
- Printing with  Print: activate the **Surface elements in background** option in  Show/Hide.
- Scanned images:
 - Printing in the Plot Layout module: scanned images always print in the background (within a drawing file).
 - Printing with  Print: scans are printed in the foreground or background depending on the setting in  Show/Hide.

Sequence with several documents

- Documents are printed out in the sequence in which they were added to the layout. In other words, those placed first are printed out first and are hidden (covered) by the documents that are added later. To place documents with fills and scans in the background, therefore, you need to place them in the layout first.
- When placing drawing files as a fileset: the drawing files are printed out based on their numbers i.e. drawing files with a higher number hide those with a lower number.
- You can use the  List, Edit Layout Elements tool to change the document sequence later. Documents displayed at the top in the dialog box hide those below.

Sequence in which documents and other elements in the layout print out

Documents are printed out first and then all the other elements directly placed in the layout (title blocks, symbols, fills created in the Draft module).

In other words, these elements hide all the documents.

You can only control this sequence by saving the elements placed directly in the layout in a document (see above: 'Sequence with several documents').

Settings on the plotter

The settings controlling the sequence in which elements print vary depending on the plotter you are using (HP, Océ etc.).

Please refer to the documentation that came with your printer to determine these settings. To optimize the results, you may have to change the settings several times.

Settings in Windows drivers

Most Windows drivers (e.g. for HP DesignJet 650C) deactivate certain settings made on the plotter. In most cases, you cannot control these settings using the driver.

In this case, you need to use Nemetschek output channels.

Printing color layouts

Requirements for printing out layouts in color:

- the plotter/printer is able to print out layouts in color and the **Color** option (if available) is enabled at the plotter/printer.
- A driver that supports color output (for example, the Nemetschek driver HPCOL_DESIGNJET).
- With Windows drivers: Enable color output in the plotter's/printer's properties (**Plot Layouts** function - **Settings** tab - **Windows Settings** - **Quality** tab)
- The **Display lines** option must be set to **Color** in **Pen & Color Assignments** (**Plot Layouts** - **Settings** tab - **Pen and Color Assignments**).

On-screen color and colors in the printout


Whether the colors on screen match those on the printout depends on whether the **Color stands for pen** is enabled or not:

- When **Color stands for pen** option is off: The colors on screen match those in the printout.
- When **Color stands for pen** option is on: the color in the printout is controlled by the setting in **Pen & Color Assignments** (**Plot Layouts** - **Settings** tab - **Pen and Color Assignments**). Each pen can be assigned a printout color there.

Printing fills and scan elements in color


Fills and scan elements always print out in color on color plotters/printers.


Printing lines, text, dimension text etc. in color

You can specify whether lines (and other 2D design entities such as text or dimension text) appear in color or in black just prior to printing. In  **Plot Layouts, Settings tab click Pen and Color Assignments**. At the bottom of the dialog box you can toggle between **Monochrome** and **Color**. When set to **Monochrome**, lines are displayed in black and fills in color. When set to **Color**, all elements (lines and fills) are displayed in color.

Printing to file

Instead of printing out your layout, you can print it to file (known as a plotfile). The data, which is otherwise sent directly to the output device and processed there, is written to a file which can be printed out at any time.

This plotfile can be sent to a service bureau for printing or you can print it out later using  **Print Plotfiles and Archives**. When creating the plotfile, please check that you have selected the printer on which the file will later be printed out. The procedure is different depending on whether you are using Nemetschek drivers or Windows drivers for plotting.


Tip: The  **Export HPGL File, Bitmap File tool** provides a comfortable way of creating plotfiles for the most common types of plotter as you do not need to define printers and/or output channels for this tool.

Using plot profiles

Plot profiles are the equivalent of templates in a word processing program. By assigning a plot profile, you ensure that the layouts have a uniform appearance and are in line with office or project conventions.. Plot profiles are saved as a file with the extension npp.

The following settings are saved in a plot profile:

- Thickness of the 15 pens
- Colors of the 15 pens
- Resizing: factor and pen thickness
- Pen optimization / use pen x for everything
- Gamma correction
- Line representation

The system administrator can create plot profiles for the entire office with the  **Configurations** tool. A standard configuration (`standard.npp`) is provided with the program and can be used as the basis for modifications.

When printing out the layouts, you can select a plot profile for every layout or choose not to use plot profiles at all. This setting is saved with the layout sheet and applies the next time the layout is loaded.

When printing in batch mode, the plot profile that is currently set in the plot definition applies. It, too, is saved with the layout that is active in the Plot Layout module.



























Appendix

Overview of Tools

This guide makes extensive reference to flyouts and the icons they contain.
















We recommend photocopying these pages and placing them somewhere near your monitor so that you can refer back to them whenever you need.

Viewports

	Refresh		3D View
	Zoom Section		Navigation Mode
	Pan		Previous View
	Regen		Next View
	Reduce View		Save, Load View
	Enlarge View		Always on Top (on)
	Scroll Left ...		Always on Top (off)
	Plan		Hidden-Line Image
	Rear Left Iso.		Activate Section
	Rear Elevation		Copy to Clipboard
	Rear Right Iso.		
	Left Elevation		
	Right Elevation		
	Front Left Iso.		
	Front Elevation		
	Front Right Iso.		

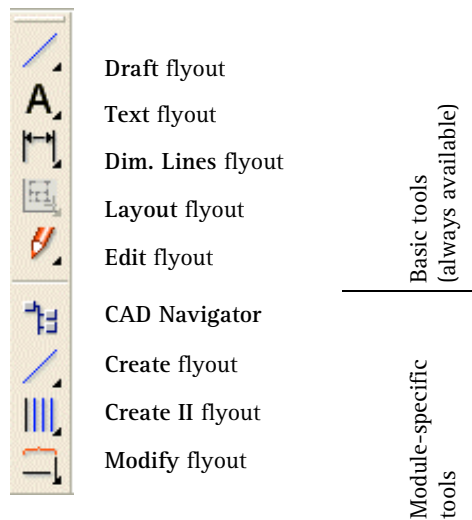
The Height dialog box

These icons define how the component you are in the process of drawing – e.g., walls, rafters, are attached to the reference planes.

	TL relative to the lower plane	Use this to set the offset between the top level of the component and the lower/upper reference plane.
	TL relative to upper plane	
	BL relative to the lower plane	Use this to set the offset between the bottom level of the component and the lower/upper reference plane.
	BL relative to upper plane	
	Absolute height TL	Use this to set the top or bottom level of the component as an absolute height.
	Absolute height BL	
	Relative to TL (component or plane)	Use this to associate the top or bottom level of a component with the top/bottom level of another component or plane. When you select this option, the reference level has to be clicked immediately.
	Relative to BL (component or plane)	
	Absolute component height	Enter the component height here.
	Vertical offset	This toggle controls whether the offset entered is to be interpreted as a vertical offset or perpendicular to the plane.
	Offset perpendicular to plane	
	Component top	This makes the component adapt to the upper plane in its entirety.
	Attach outer component edge to plane	With this, the top, outside edge of the component will adapt to the upper reference plane.
	Component edge above plane	With this, the component will pierce the upper reference plane by the value you specify.
	Maximum component height	When the top level of the component is attached to the upper reference plane, you can use this to have the component not exceed a certain height and to run horizontally at that height.

The main flyout toolbars

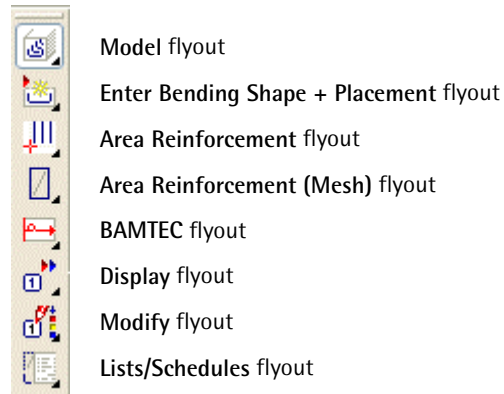
Basic Tools toolbar



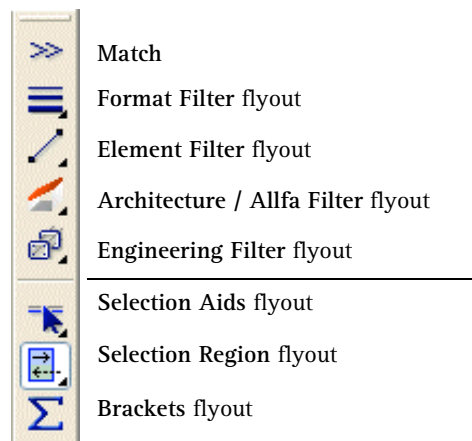
Architecture toolbar



Engineering toolbar



Filter Assistant toolbar



Index

A

- access rights 40
- adjusting units and lengths 129
- architecture
 - toolbar 158
- assignments 131

B

- basic tools
 - toolbar 158
- bitmap area 107
- bracket feature 97

C

- CAD Navigator 27
- Clipboard 69
- COM navigation *See* shortcut menu
- common approaches in
 - ProjectPilot 49
- components of a layout 148
- configuration files
 - overview 132
- coordinate offset 126
- coordinates
 - displaying 87
 - entering 85
- correcting errors 64
- CursorTips- the intelligent cursor 91

D

- defaults 115, 116
- design groups 45
- dialog line 26
- display sequence 59
 - element property 60
 - modifying 61
- displaying coordinates 87
- document 30

- document-based approach 34
- drag handles *see* handles
- drawing file 30
 - assigning to filesets 33
- drawing file status 32
- drawing files
 - general information 31
- DXF/DWG/DGN files
 - file types 124

E

- editing
 - using handles 79
- entering length values 85
- entering length values and coordinates 85
- export
 - file types 124

F

- favorites 115, 116
- file types for import and export 124
- fileset 30
 - assigning drawing files 33
- filesets 33
 - creating 33
- fill 107
- filter assistant
 - toolbar 158
- flyouts 24
- format properties 67

H

- handles 79
- hatching 107
 - reference scale 109
- height
 - dialog box 156

I

- import
 - file types 124
- input options 23
- installation
 - software requirements 9

L

- layer sets 46
- layers 38
 - access rights 40
 - advantages 42
 - attributes 39
 - format properties 39
 - general information 38
 - hierarchy 44
 - in drawing files 43
 - managing 42
 - visibility 41
- layout 30
- lengths
 - adjusting 129
- libraries 115

M

- modules 27
- mouse
 - usage 53

N

- NDW-format files 34
- Nemetschek raster drivers 145
- Nemetschek vector drivers 145
- NPL-format files 36

O

- offset 126
- OLE objects 71
 - bitmaps 72
 - editing 73
 - embedding 71
 - linking 71
 - transparency 73
- online help system 2

P

- paths in Allplan 122
- pattern 107

plot layout

- components of a layout 148
- drivers 145
- general approach 144
- printing color layouts 151
- printing to file 152
- sequence in which elements
 - print 149
 - using plot profiles 153
- point entry 82
- point snap 82, 87
- polyline entry tools 100
- print preview 137
 - options 140
 - tools 138
- printing color layouts 151
- printing the contents of the display 137
- printing to file 152
- project 30
- ProjectPilot 47
 - common approaches 49
 - user interface 48

Q

- quitting 62

S

- saving 65
 - documents 65
 - drawing files 65
 - NDW-format files 65
- saving components as favorites 116
- screen
 - display 57
- selecting 77
 - entering a region 78
 - handles 79
- selecting elements 77
 - entering a region 78
 - handles 79
- sequence in which elements print 149
- shortcut menu 25
- smart symbols
 - components of 120
 - defining 121

- properties 119
- using 118
- Sources of information
 - training, coaching and project support 5
- standard views 57
- status bar 26
- symbols 117

T

- toolbar
 - architecture 158
 - basic tools 158
- toolbars 21
 - Basic Tools 21
 - configuration toolbars 22
 - filter assistant 23, 158
 - flyouts 24
 - point assistant 92
- tools 62
- Tools for exchanging data 123
- track lines 101
- track points 101

U

- units
 - adjusting 129
- user interface 20
- using plot profiles 153

V

- view 57
- viewports 155

W

- Windows drivers 145
- wizard 63

X

- XRefs 74
 - editing 75
 - restrictions 75
 - using 74

Z

- zoom 57

Notes

