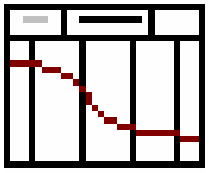
Evaluation and visualisation of time-settlement tests

GGU-TIMESET

VERSION 5



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Contents:

1 Preface 4

2 Licence protection 4

3 Language selection 4

4 Starting the program 5

5 Description of menu items 6

5.1 File menu 6

5.1.1 "New" menu item 6

5.1.2 "Load" menu item 6

5.1.3 "Append" menu item 6

5.1.4 "Save" menu item 6

5.1.5 "Save as" menu item 6

5.1.6 "Import ASCII file" menu item 7

5.1.7 "Export to ASCII" menu item 7

5.1.8 "Output preferences" menu item 7

5.1.9 "Print and export" menu item 8

5.1.10 "Batch print" menu item 10

5.1.11 "Exit" menu item 10

5.1.12 "1, 2, 3, 4" menu items 10

5.2 Edit menu 11

5.2.1 "Tests" menu item 11

5.2.2 "Swap" menu item 14

5.2.3 "Delete all" menu item 14

5.2.4 "General" menu item 14

5.2.5 "Annex numbers" menu item 15

5.2.6 "Company" menu item 16

5.2.7 "Remarks" menu item 16

5.3 Graphics preferences menu 16

5.3.1 "View output table"/"View diagram" menu items 16

5.3.2 "Preferences" menu item 17

5.3.3 "Refresh and zoom" menu item 19

5.3.4 "Zoom info" menu item 19

5.3.5 "Legend font selection" menu item 19

5.3.6 "Font size selection" menu item 19

5.3.7 "Pen colour and width" menu item 20

5.3.8 "Mini-CAD toolbar" menu item 20

5.3.9 "Toolbar preferences" menu item 21

5.3.10 "Save graphics preferences" menu item 22

5.3.11 "Load graphics preferences" menu item 22

5.4 Output preferences menu 23

5.4.1 "Page size" menu item 23

5.4.2 "Texts + table" menu item 23

5.4.3 "Margins" menu item 25

5.4.4 "Position info" menu item 26

5.4.5 "Title (change position)" menu item 26
5.4.6 "Time-settlement graphs" menu item 26
5.4.7 "Company" menu item 26
5.4.8 "Test no. etc." menu item 27
5.4.9 "Annex and report" menu item 27
5.4.10 "Remarks" menu item 27
5.4.11 "Edited by + date" menu item 27
5.4.12 "Diagram table" menu item 27
5.4.13 "Output table (test data)" menu item 28
5.4.14 "Output table (results)" menu item 28
5.4.15 "Reset all" menu item 28
5.4.16 "Move objects" menu item 28
5.5 Info menu 29
5.5.1 "Copyright" menu item 29
5.5.2 "Maxima" menu item 29
5.5.3 "Help" menu item 29
5.5.4 "GGU on the web" menu item 29
5.5.5 "GGU support" menu item 29
5.5.6 "What's new?" menu item 29
5.5.7 "Language preferences" menu item 29
6 Tips and tricks 30
6.1 Keyboard and mouse 30
6.2 Function keys 30
6.3 "Copy/print area" icon 31
7 Index 32

1 Preface

The **GGU-TIMESET** program allows evaluation and visualisation of time-settlement tests.

The program is designed to allow simple data input. The system is permanently displayed on the screen. Every alteration to the data is shown on the screen, so that optimum control of input data is guaranteed. Graphics output supports the true-type fonts supplied with WINDOWS, so that excellent layout is guaranteed. Colour output and any graphics (e.g. files in formats BMP, JPG, PSP, TIF, etc.) are supported. PDF and DXF files can also be imported by means of the integrated **Mini-CAD** module (see the "**Mini-CAD**" manual).

The program has been thoroughly tested on numerous examples from the literature and in engineering practice. No faults have been found. Nevertheless, liability for completeness and correctness of the program and the manual, and for any damage resulting from incompleteness or incorrectness, cannot be accepted.

2 Licence protection

GGU software is provided with the WIBU-Systems CodeMeter software protection system. For this purpose the GGU-Software licences are linked to a USB dongle, the WIBU-Systems CmStick, or as CmActLicense to the respective PC hardware.

It is required for licence access that the CodeMeter runtime kit (CodeMeter software protection driver) is installed. Upon start-up and during running, the **GGU-TIMESET** program checks that a licence on a CmStick or as CmActLicense is available.

3 Language selection

GGU-TIMESET is a bilingual program. The program always starts with the language setting applicable when it was last ended.

The language preferences can be changed at any time in the "**Info**" menu, using the menu item "**Spracheinstellung**" (for German) or "**Language preferences**" (for English).

4 Starting the program

After starting the program, you will see two menus at the top of the window**:**

- File
- Info

By going to the "**File**" menu, a previously saved file can be loaded by means of the "**Load**" menu item, or a new one created using "**New**". After clicking "**File/New**" an empty form is displayed on the screen. The menu bar will then show five menus:

- File
- Edit
- Graphics preferences
- Output preferences
- Info

After clicking one of these menus, the so-called menu items roll down, allowing you access to all program functions.

The program works on the principle of ***What you see is what you get***. This means that the screen presentation represents, overall, what you will see on your printer. In the last consequence, this would mean that the screen presentation would have to be refreshed after every alteration you make. For reasons of efficiency and as this can take several seconds for complex screen contents, the **GGU-TIMESET** screen is not refreshed after every alteration.

If you would like to refresh the screen contents, press either [**F2**] or [**Esc**]. The [**Esc**] key additionally sets the screen presentation back to your current zoom, which has the default value 1.5, corresponding to an A4 sheet in landscape format.

5 Description of menu items

5.1 File menu

5.1.1 "New" menu item

All data entered will be deleted after a confirmation prompt. You can then define new tests.

5.1.2 "Load" menu item

You can load a file with test data, which was created and saved at a previous sitting, and then edit the test data.

5.1.3 "Append" menu item

Using this menu item it is possible to load the results of a number of time-settlement tests, stored on disk as separate files, in order to visualise them together on one sheet. The tests contained in the added file will be appended to the current record.

> Please note that the information concerning the page format, general entries (e.g. company name, project description, report no.) and preferences (e.g. time-settlement graphs pens) are not imported with the appended file.
>
> Any annotations or preferences should therefore be defined after appending.

5.1.4 "Save" menu item

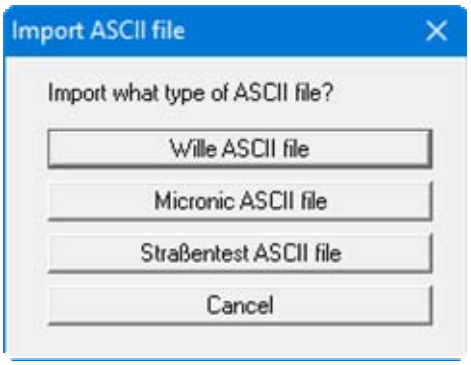
You can save data entered or edited during program use to a file, in order to have them available at a later date, or to archive them. The data is saved without prompting with the name of the current file. Loading again later creates exactly the same presentation as was present at the time of saving.

5.1.5 "Save as" menu item

You can save data entered during program use to an existing file or to a new file, i.e. using a new file name. For reasons of clarity, it makes sense to use "**.zst** " as file suffix, as this is the suffix used in the file requester box for the menu item "**File / Load**". If you choose not to enter an extension when saving, "**.zst** " will be used automatically.

5.1.6 "Import ASCII file" menu item

It is possible to import ASCII files from selected device manufacturers using this menu item.



By clicking the respective buttons, you can automatically import either "**Wille**", "**Micronic**" or "**Straßentest**" data. If you need to read data in a format provided by a different company, please contact **CIVILSERVE** (info@civilserve.com).

5.1.7 "Export to ASCII" menu item

The test data can be exported to an ASCII file, allowing processing in other applications.

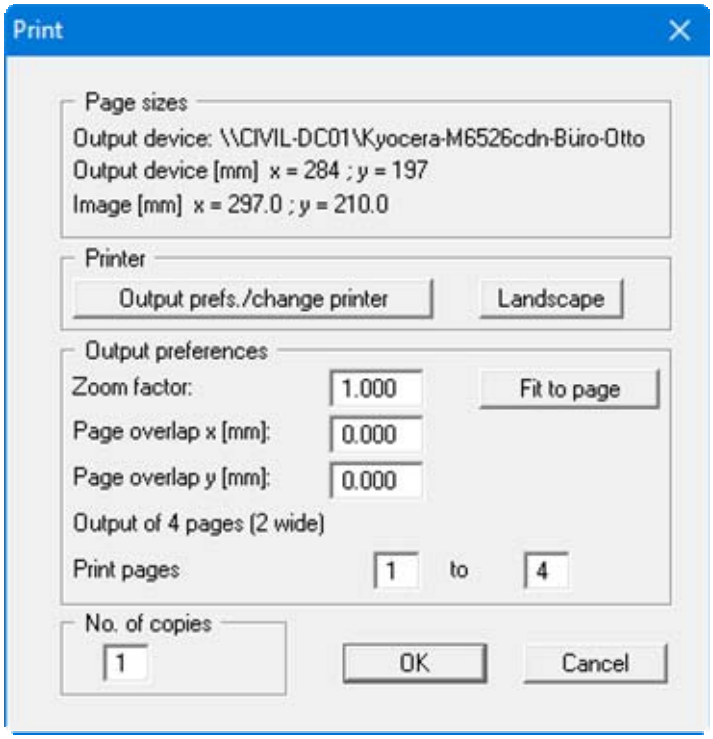
5.1.8 "Output preferences" menu item

You can edit output preferences (e.g. swap between portrait and landscape) or change the printer in accordance with WINDOWS conventions.

5.1.9 "Print and export" menu item

You can select your output format in a dialog box. You have the following possibilities:

- "**Printer**"
  allows graphic output of the current screento the WINDOWS standard printer or to any other printer selected using the menu item "**File/Output preferences**". But you may also select a different printer in the following dialog box by pressing the "**Output prefs./change printer**" button.



  In the upper group box, the maximum dimensions which the printer can accept are given. Below this, the dimensions of the image to be printed are given. If the image is larger than the output format of the printer, the image will be printed to several pages (in the above example, 4). In order to facilitate better re-connection of the images, the possibility of entering an overlap for each page, in x and y direction, is given. Alternatively, you also have the possibility of selecting a smaller zoom factor, ensuring output to one page ("**Fit to page**" button). Following this, you can enlarge to the original format on a copying machine, to ensure true scaling. Furthermore, you may enter the number of copies to be printed..

- "**DXF file**"
  allows output of the graphics to a DXF file. DXF is a common file format for transferring graphics between a variety of applications.

- "**GGU-CAD file**"
  allows output of the graphics to a file, in order to enable further processing with the **GGU-CAD** program. Compared to output as a DXF file this has the advantage that no loss of colour quality occurs during export.

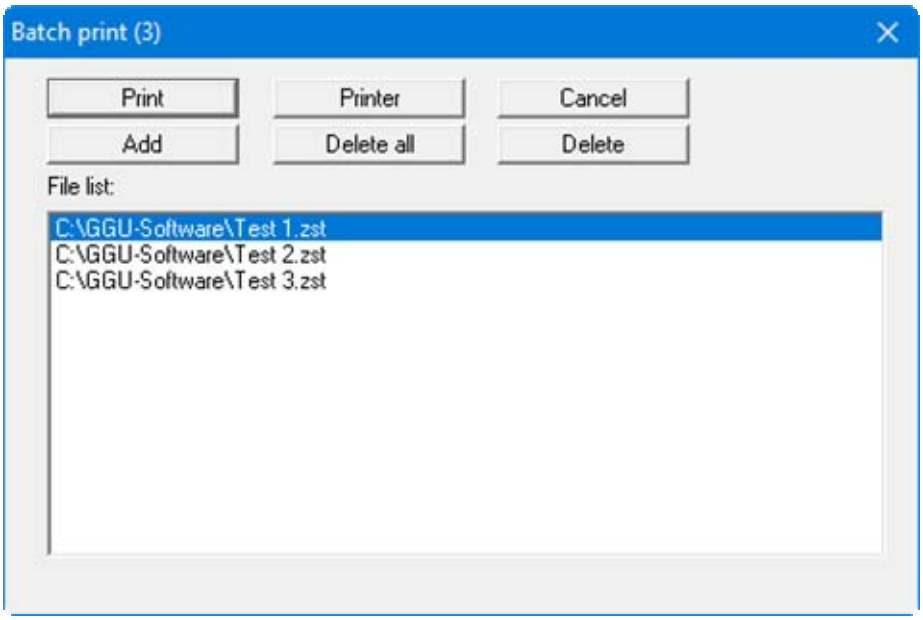
- "**Clipboard**"
  The graphics are copied to the WINDOWS clipboard. From there, they can be imported into other WINDOWS programs for further processing, e.g. into a word processor. In order to import into any other WINDOWS program you must generally use the "*Edit/Paste*" function of the respective application.
- "**Metafile**"
  allows output of the graphics to a file in order to be further processed with third party software. Output is in the standardised EMF format (Enhanced Metafile format). Use of the Metafile format guarantees the best possible quality when transferring graphics.

> If you select the "**Copy/print area**" tool from the toolbar, you can copy parts of the graphics to the clipboard or save them to an EMF file. Alternatively you can send the marked area directly to your printer (see "**Tips and tricks**", Section 6.3).
>
> Using the "**Mini-CAD**" program module you can also import EMF files generated using other GGU applications into your graphics (see Section 5.3.8).

- "**Mini-CAD**"
  allows export of the graphics to a file in order to enable importing to different GGU applications with the **Mini-CAD** module.
- "**GGUMiniCAD**"
  allows export of the graphics to a file in order to enable processing in the GGUMiniCAD program.
- "**Cancel**"
  Printing is cancelled.

5.1.10 "Batch print" menu item

If you would like to print several appendices at once, select this menu item. You will see the following dialog box:



Create a list of files for printing using "**Add**" and selecting the desired files. The number of files is displayed in the dialog box header. Using "**Delete**" you can mark and delete selected individual files from the list. After selecting the "**Delete all**" button, you can compile a new list. Selection of the desired printer and output preferences is achieved by pressing the "**Printer**" button.

You then start printing by using the "**Print**" button. In the dialog box which then appears you can select further preferences for printer output such as, e.g., the number of copies. These preferences will be applied to all files in the list.

5.1.11 "Exit" menu item

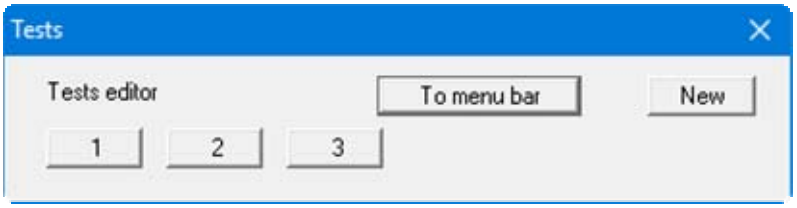
After a confirmation prompt, you can quit the program.

5.1.12 "1, 2, 3, 4" menu items

The "**1, 2, 3, 4**" menu items show the last four files worked on. By selecting one of these menu items the listed file will be loaded. If you have saved files in any other folder than the program folder, you can save yourself the occasionally onerous ***rummaging*** through various sub-folders.

5.2.1 "Tests" menu item

This point represents the program's central menu item. As an example, after clicking this menu item the following dialog box opens:

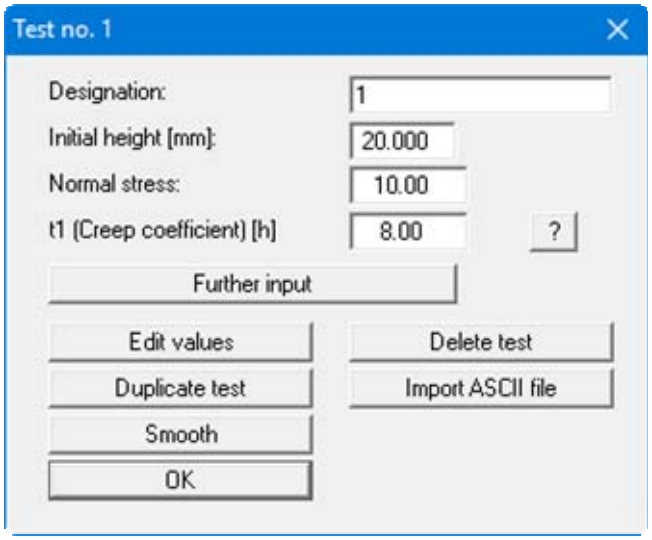


Three tests are already present in this example. The tests are automatically numbered and the test numbers ("1, 2, 3, ...") shown on the respective buttons. The following actions are possible:

- "**To menu bar**"
  You return to the original menu bar.
- "**New**"
  You can now enter data for a new test.
- "**1**", "**2**", **...**
  By clicking the buttons labelled with the test numbers you can open and edit the data for the corresponding test.

> Presentation of the time-settlement graphs and the corresponding columns or rows in the diagram table always follows the sequence of the test numbers.
>
> The presentation sequence can be altered by going to "**Edit/Swap**" (see Section 5.2.2). The selected tests are then assigned the specified new test numbers.

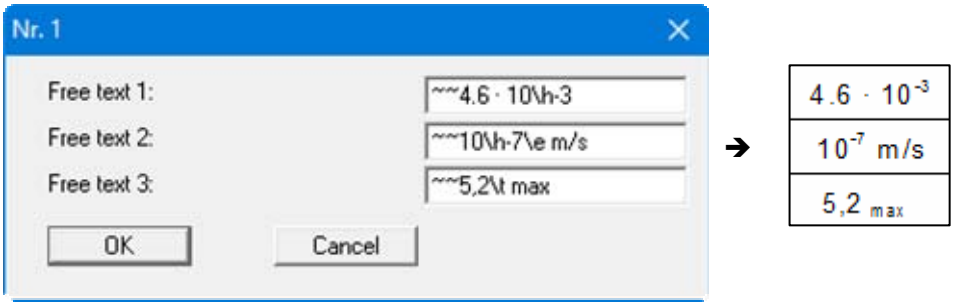
After clicking on "**New**" or on the button of an existing test a dialog box opens for entering the test data. A maximum of 16 single tests can be entered. You can access the editor quickly by double-clicking in the table region containing the required time-settlement test. The following dialog box opens:



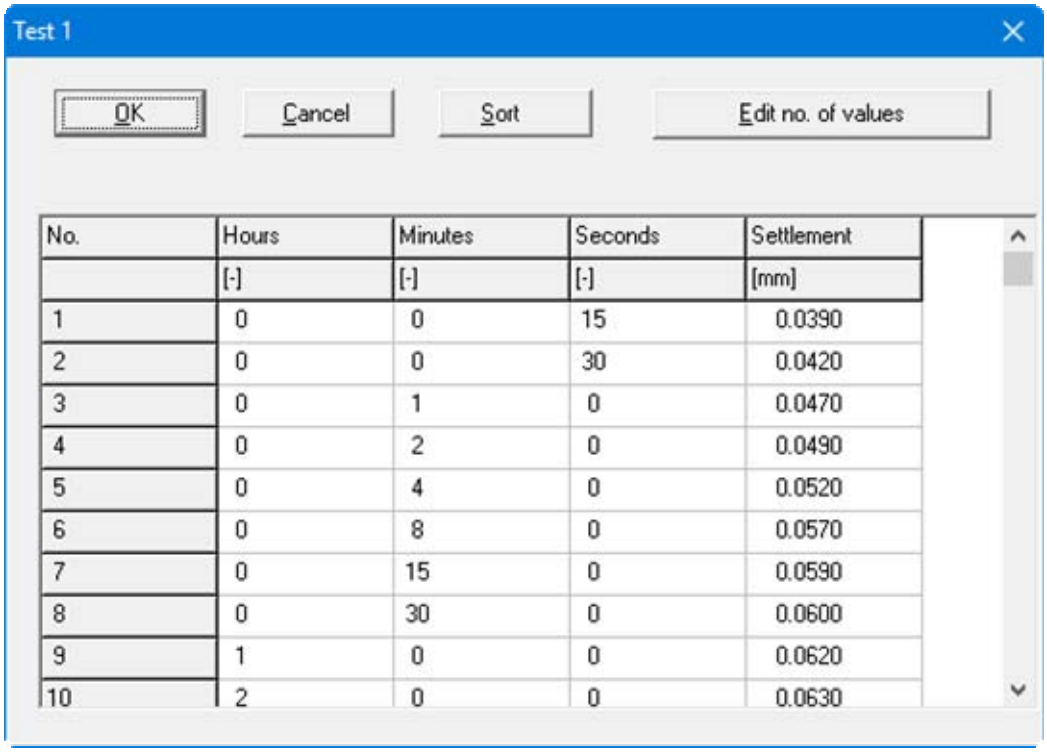
Enter the designation, initial height (mm), normal stress and the creep coefficient of the single test in this box.

After clicking the "**Further input**" button it is possible to enter further sample properties (e.g. soil type, sampling location, etc.). These additional input boxes can be specified using the menu item "**Output preferences/Texts + table**", "**Edit texts and allocations**" button. Specify "**Free text**" as the allocation for the input boxes (see Section 5.4.2, page 25).

In the **Free texts** you can make input with superscript or subscript numbers or letters using the conventions described below. To start the text enter two '~~' characters. Superscripts and subscripts are activated using the backslash combinations '**\h**' and '**\t**'. If you need to use normal characters again following the superscripts or subscripts, follow them by '**\e**' before continuing normally (see file "**Free texts with superscript-subscript.zst**").



The measured data is entered after clicking the "**Edit values**" button:



No.	Hours	Minutes	Seconds	Settlement
	[-]	[-]	[-]	[mm]
1	0	0	15	0.0390
2	0	0	30	0.0420
3	0	1	0	0.0470
4	0	2	0	0.0490
5	0	4	0	0.0520
6	0	8	0	0.0570
7	0	15	0	0.0590
8	0	30	0	0.0600
9	1	0	0	0.0620
10	2	0	0	0.0630

In the example used here 12 data pairs have already been entered. The number of measured values can be edited by clicking the "**Edit no. of values**" button. The values are sorted according to time by pressing the "**Sort**" button. If irrelevant intermediate data needs to be deleted, change the time to a very large value so that the record is moved to the end. Subsequent reduction of the number of values then deletes this record from the list.

The following additional actions are possible in the editor box of the selected single test:

- "**Delete test**"
  After a confirmation prompt the single test is deleted.
- "**Duplicate test**"
  The test can be duplicated. All input is copied and the dialog box of the newly generated test is opened automatically.
- "**Import ASCII file**"
  The measured data can imported from a file in standard ASCII format. After importing an appropriate file the current row of the ASCII file is displayed at the top of the dialog box. The time can be given in seconds or as a time, for example in the format '14.16.54'. The file can be navigated using the arrow buttons on the right. Enter the column number in which the respective data is located in the "**Time column**" and the "**Settlement column**". If all the information is correct, the result for the row is shown in the box below the column. Otherwise, "**Error**" appears. If necessary, change the column delimiter. If the file contains invalid as well as valid rows, these will simply be skipped during the subsequent import. If the measured data are not in the correct units, a correction factor can be entered under "**Settlement factor**". Finally, select the "**Import data**" button. The test can then be further processed or evaluated.

- "**Smooth**"
  Perturbed measured data series' can be smoothed using this program routine. Save the record before employing this function as the smoothing operation cannot be undone.
- "**OK**"
  You will arrive back at the previous dialog box. All values entered will be accepted.

5.2.2 "Swap" menu item

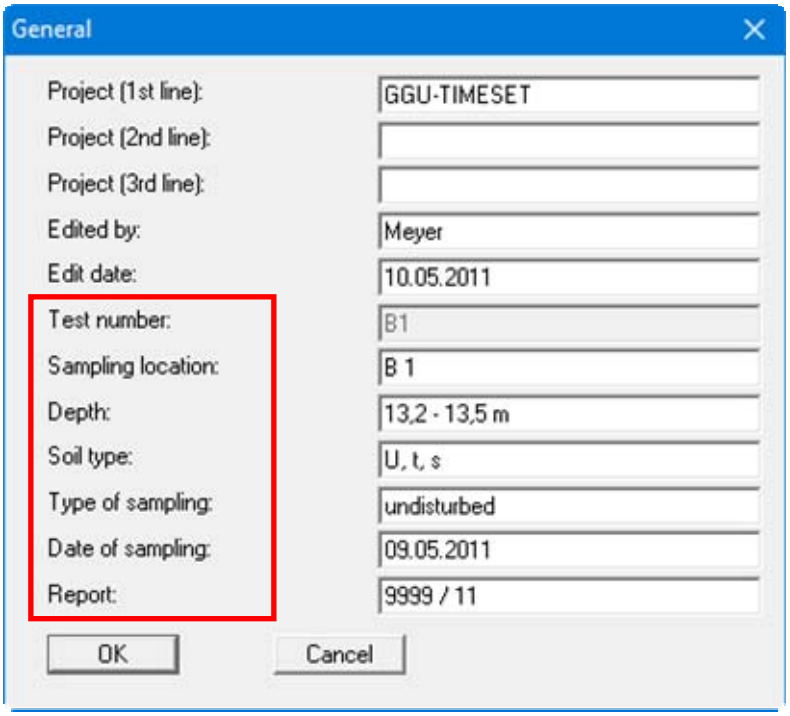
Important time-settlement test data (e.g. initial height, normal stress) are displayed in the table below the diagram. For several time-settlement tests, the presentation sequence corresponds to the input sequence, from left to right. If you would like to change this sequence you can do so after selecting this menu item.

5.2.3 "Delete all" menu item

After a security request, all tests will be deleted. After this, you can enter a new test using the "**Edit/Tests**" menu item (see Section 5.2.1).

5.2.4 "General" menu item

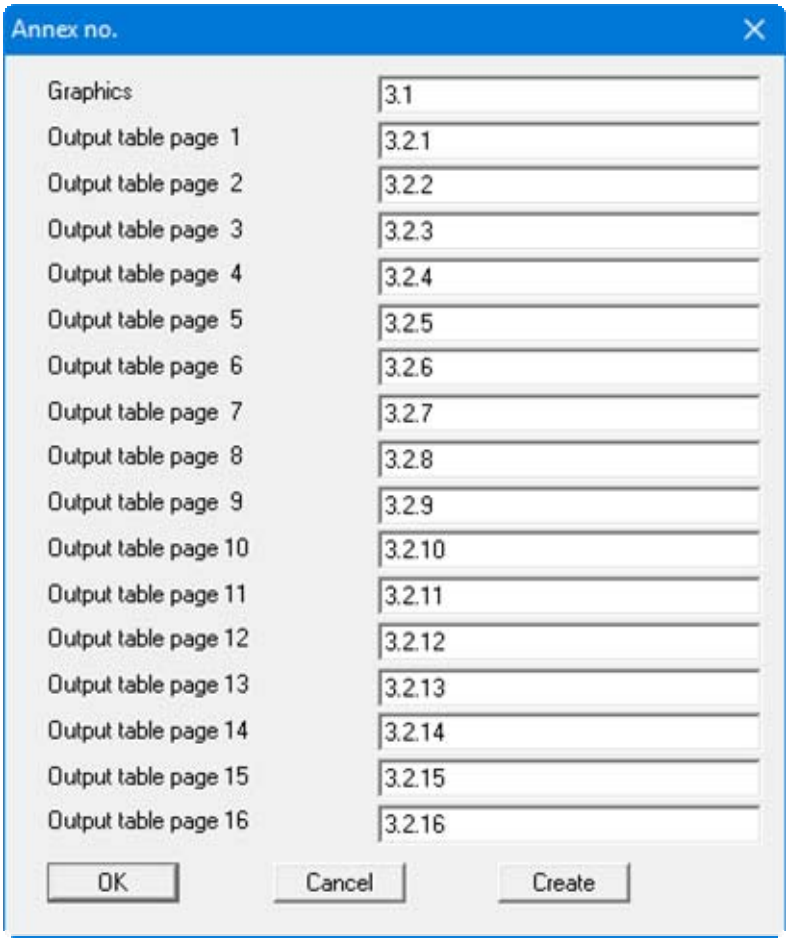
Go to this menu item to enter general data such as the project identification, report number, etc. This data is displayed in the correct elements of the output sheet.



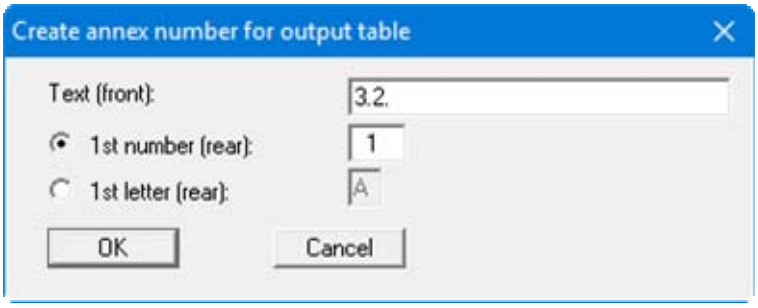
The marked texts in the dialog box also appear in the output sheet. Input boxes can be altered or switched off such as "**Test number:**" as shown in the above dialog box by going to the menu item "**Output preferences/Texts + table**" and pressing the "**Output sheet texts**" button (see Section 5.4.2).

5.2.5 "Annex numbers" menu item

Here it is possible to define the numbering of the time-settlement graph annexes and output table sheets The numbers can be either user-defined or determined automatically by the program. The following dialog box, with 16 input rows for output sheets, opens regardless of the actual number of tests entered. This is the maximum possible number of single tests.



The numbers for the output sheets can be easily generated by the program using the "**Generate**" button. Make the following entries to get the numbering shown above:



Enter the text to appear in front of the automatic numbering in the first input box; this can be a different number to the annex number for the graphics. It is then possible to select between numbering with numerals or a letter sequence. Activate the required command button and enter the first number or letter (in lower or upper case).

5.2.6 "Company" menu item

You can enter your company address in four rows. These rows will be entered at the top left of the form.

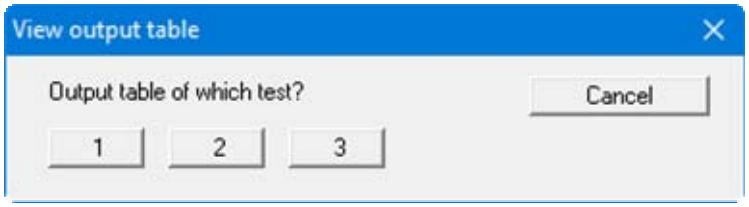
5.2.7 "Remarks" menu item

Using this menu item it is possible to enter remarks to the tests in four rows of text, which are displayed at the lower right of the form.

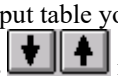
5.3 Graphics preferences menu

5.3.1 "View output table"/"View diagram" menu items

The default screen visualisation is the time-settlement tests graphics. If you go to the "**View output table**" menu item, the following dialog box opens:

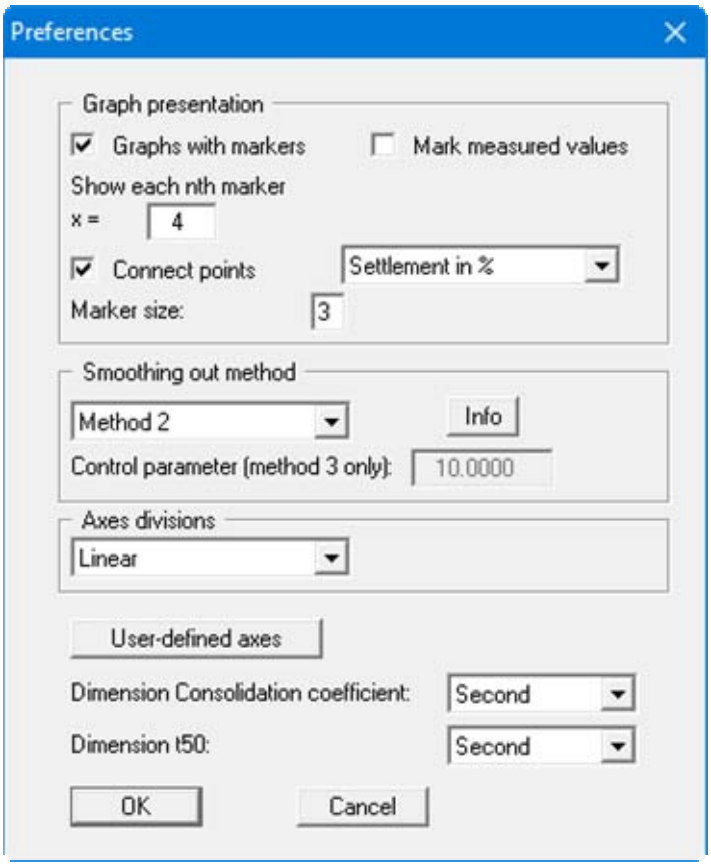


The "**1**", "**2**" etc. buttons represent the tests entered. The most important test data can be viewed for every test. If more than 35 measurements are available for the selected test the number must be reduced for the output sheet.

If you are viewing the output table you can navigate between the output tables for the individual tests using the arrow tools  in the Smart icon bar. In order to return to the graphical visualisation of the time-settlement tests, click on the now active menu item "**View diagram**" or simply on the tool in the Smart icon bar. You can move between the output table and the graphical visualisation using this tool.

5.3.2 "Preferences" menu item

After selecting this menu item a dialog box appears, in which you can edit preferences for graphical presentation.



- "**Graph presentation**" group box:
  By activating the appropriate check boxes the measured data can be visualised as a time-settlement graph, provided with markers at given intervals or directly attached to the measured data. The marker size is user-defined. If "**Graphs with markers**" is activated the spacing can be altered by changing the value of "**x =**".

  Each time-settlement graph uses a different marker, thus ensuring simple differentiation between several time-settlement graphs, even on monochrome printouts. This also allows easier allocation of several time-settlement graphs to the data in the diagram table. Simply include the time-settlement graph signature in the diagram table (see menu item "**Output preferences/Texts + Table**", "**Edit texts and allocations**" button in the 5.4.2 section).

- "**Smoothing out method**" group box
  You can select from four smoothing out methods: A message box provides information on the type of smoothing:

  No smoothing = no smoothing
  Method 1 = strict Bezier spline
  Method 2 = "loose" Bezier spline
  Method 3 = rational spline interpolation

  Very rounded graphs are generated using smoothing out methods 2 and 3. Deviations between the measured data and the time-settlement graphs are visible when the measured test data is marked.

  For method 3, smoothing can be influenced with the "**Control parameter**". The value of the control parameters may only be in the range between > -1.0 and < 1000.

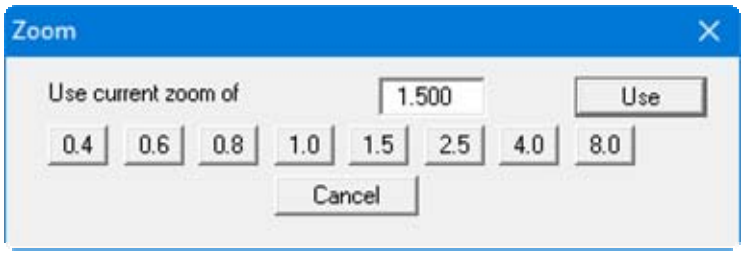
- "**Axes divisions**" group box
  A linear, logarithmic or a root scale can be selected for visualisation of the graph's time axis.

- "**User-defined axes**" button
  The program automatically selects a sensible axes scale for the graphical visualisation of the time-settlement graphs . If the "**User-defined axes**" button is clicked a dialog box opens in which the check box "**Use the following axes values**" must be activated. The required minimum and maximum values for time and settlement can then be entered.

5.3.3 "Refresh and zoom" menu item

The program works on the principle of ***What you see is what you get***. This means that the screen presentation represents, overall, what you will see on your printer. In the last consequence, this would mean that the screen presentation would have to be refreshed after every alteration you make. For reasons of efficiency and as this can take several seconds for complex screen contents, the screen is not refreshed after every alteration.

If, e.g., after using the zoom function (see below), only part of the image is visible, you can achieve a complete view using this menu item.



A zoom factor between 0.4 and 8.0 can be entered in the input box. By then clicking on "**Use**" to exit the box the current factor is accepted. By clicking on the "**0.4**", "**0.6**", etc. buttons, the selected factor is used directly and the dialog box closed.

It is much simpler, however, to get a complete overview using [**Esc**]. Pressing [**Esc**] allows a complete screen presentation using the zoom factor specified in this menu item. The [**F2**] key allows screen refreshing without altering the coordinates and zoom factor.

5.3.4 "Zoom info" menu item

By clicking two diametrically opposed points you can enlarge a section of the screen in order to view details better. An information box provides information on activating the zoom function and on available options.

5.3.5 "Legend font selection" menu item

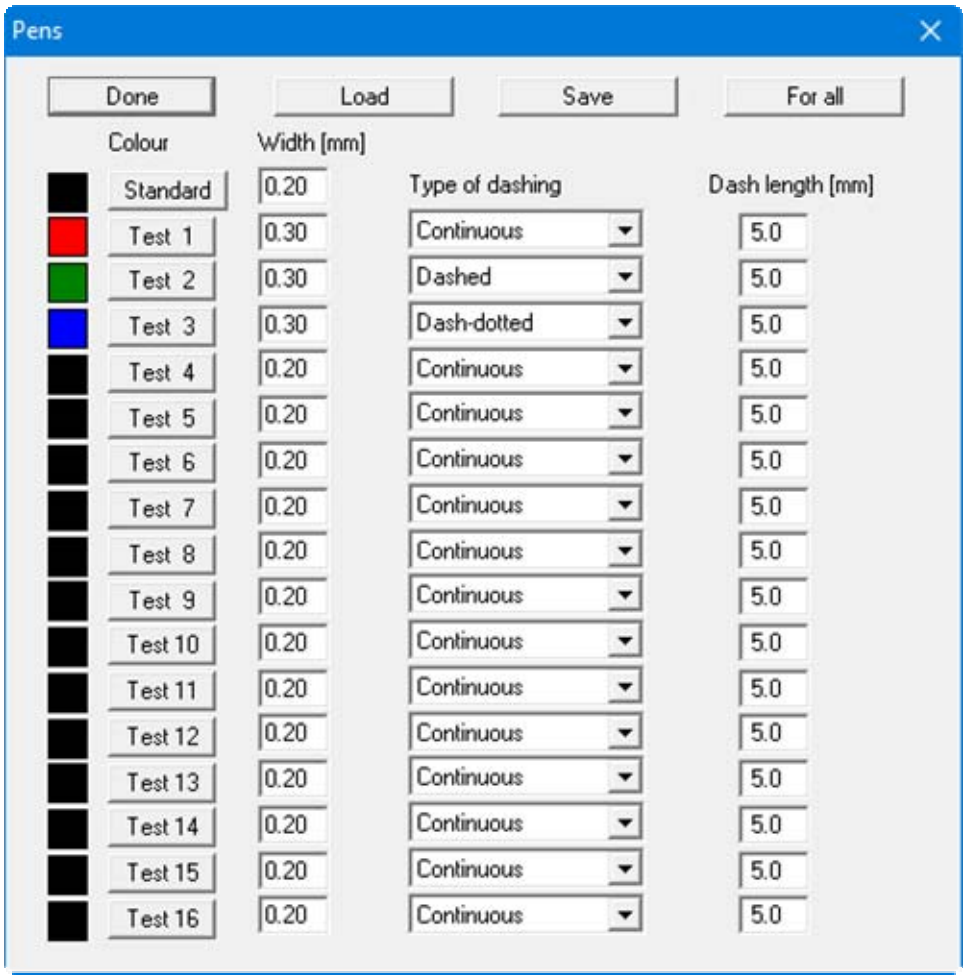
With this menu item you can switch to a different true-type font. All available true-type fontsare displayed in the dialog box.

5.3.6 "Font size selection" menu item

You can edit font sizes of texts [in mm] within the various input areas.

5.3.7 "Pen colour and width" menu item

For reasons of clarity, different colours are used as default for graphic presentation of the time-settlement graphs, as well as the type of dashing. With this menu item you can alter the preferences to suit your wishes.



The pen width, line type and dashing can be edited for the time-settlement graphs and, after clicking the buttons with the test numbers, the pen colours be adapted. If the same line colour is to be used for all time-settlement graphs, press the "**For all**" button and specify the required colour. The pen preferences can be saved as an "***.stf**" file, or be loaded from such, using "**Save**" and "**Load**", in order to give a variety of pen combinations.

On ***monochrome printers*** (e.g. laser printers), colours are shown in a corresponding grey scale. Graphic elements employing very light colours may be difficult to see. In such cases it makes sense to edit the colour preferences.

5.3.8 "Mini-CAD toolbar" menu item

Using this menu item you can add free text to the graphics and add lines, circles, polygons and images (e.g. files in formats BMP, JPG, PSP, TIF, etc.). PDF files can also be imported as images. A pop-up menu opens, the icons and functions used are described in more detail in the **Mini-CAD** manual saved in the '**C:\Program Files (x86)\GGU-Software\ Manuals**' folder during installation.

5.3.9 "Toolbar preferences" menu item

After starting the program a horizontal toolbar appears below the program menu bar. If you would rather work with a popup window with several columns, you can specify your preferences using this menu item. The smart icons can also be switched off.

At the bottom of the program window you find a status bar with further information. You can also activate or switch off the status bar here. The preferences will be saved in the "**GGU-TIMESET.alg**" file (see menu item "**Graphics preferences/Save graphics preferences**") and will be active at the next time the program is started.

By clicking on the tools (smart icons) you can directly reach most of the program functions. The meaning of the Smart icons appears as a text box if you hover with the mouse pointer over the tools. Some of the tool functions can be activated from the normal menu items.

"**Zoom out**"
If you have previously ***zoomed in***, this tool returns to a full screen display.

"**Zoom (-)**"/"**Zoom (+)**"
With the zoom functions you can zoom in or out of parts of the image, by clicking the left mouse button.

"**Undo move object**"
If you have previously edited the position or size of an element on the output sheet ([**F11**] or used "**Output preferences/Move objects**"), you can undo the last changement with this tool.

"**Restore move object**"
If you have previously undone a changement, you can restore with this tool.

"**Copy/print area**"
Use this tool to copy only parts of the graphics in order to paste them, e.g. to a report. You will see information on this function and can then mark an area, which is copied to the clipboard or can be saved in a file. Alternatively you can send the marked area directly to your printer (see "**Tips and tricks**", Section 6.3).

5.3.10 "Save graphics preferences" menu item

Some of the preferences you made with the menu items of the "**Graphics preferences**" menu as well as the inputs using the "**Edit/Company**" menu item can be saved to a file. If you select "**GGU-TIMESET.alg**" as file name, and save the file on the same level as the program, the data will be automatically loaded the next time the program is started and need not be entered again.

> If you do not go to "**File/New**" upon starting the program, but open a previously saved file instead, the preferences used at the time of saving are shown. If subsequent changes in the general preferences are to be used for existing files, these preferences must be imported using the menu item "**Graphics preferences/Load graphics preferences**".

5.3.11 "Load graphics preferences" menu item

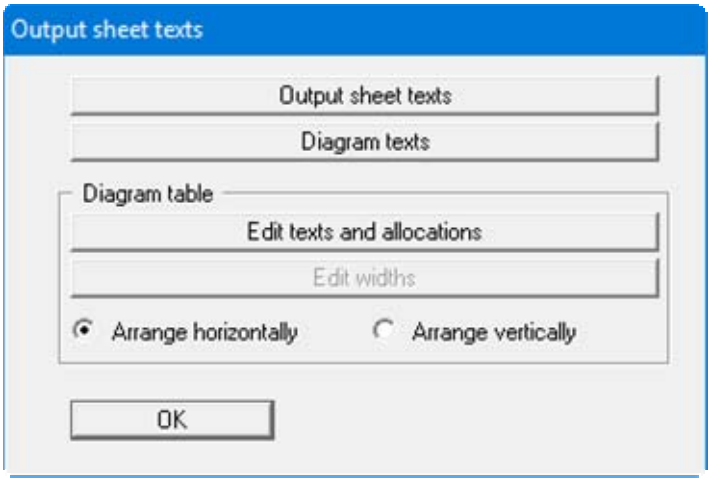
You can reload a graphics preferences file into the program, which was saved using the "**Graphics preferences/Save graphics preferences**" menu item. Only the corresponding data will be refreshed.

5.4.1 "Page size" menu item

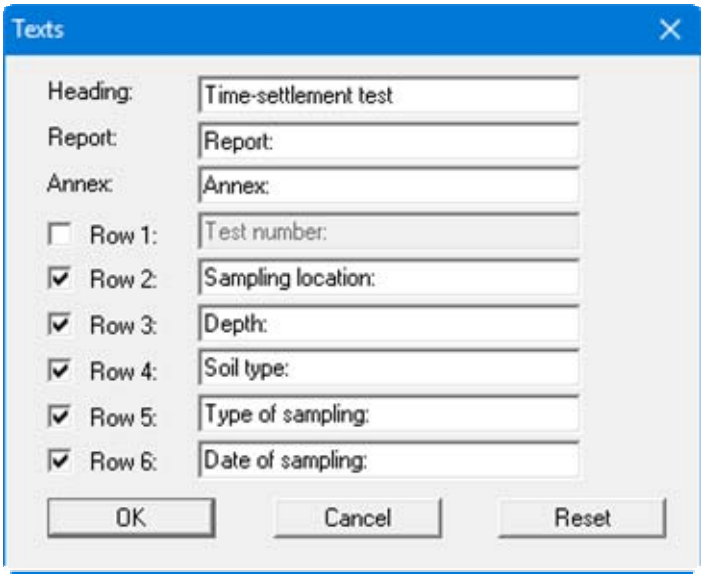
The default page set-up is A4 (landscape) when the program is started. You can edit the page format in the dialog box.

5.4.2 "Texts + table" menu item

The default labelling of some output sheet elements can be edited in this menu item's dialog box. Among other things, the name of the output sheet can be specified here. An option box opens in which the various fields can be selected for editing using the correspondingly labelled buttons.



After clicking the "**Output sheet texts**" button the following dialog box opens:



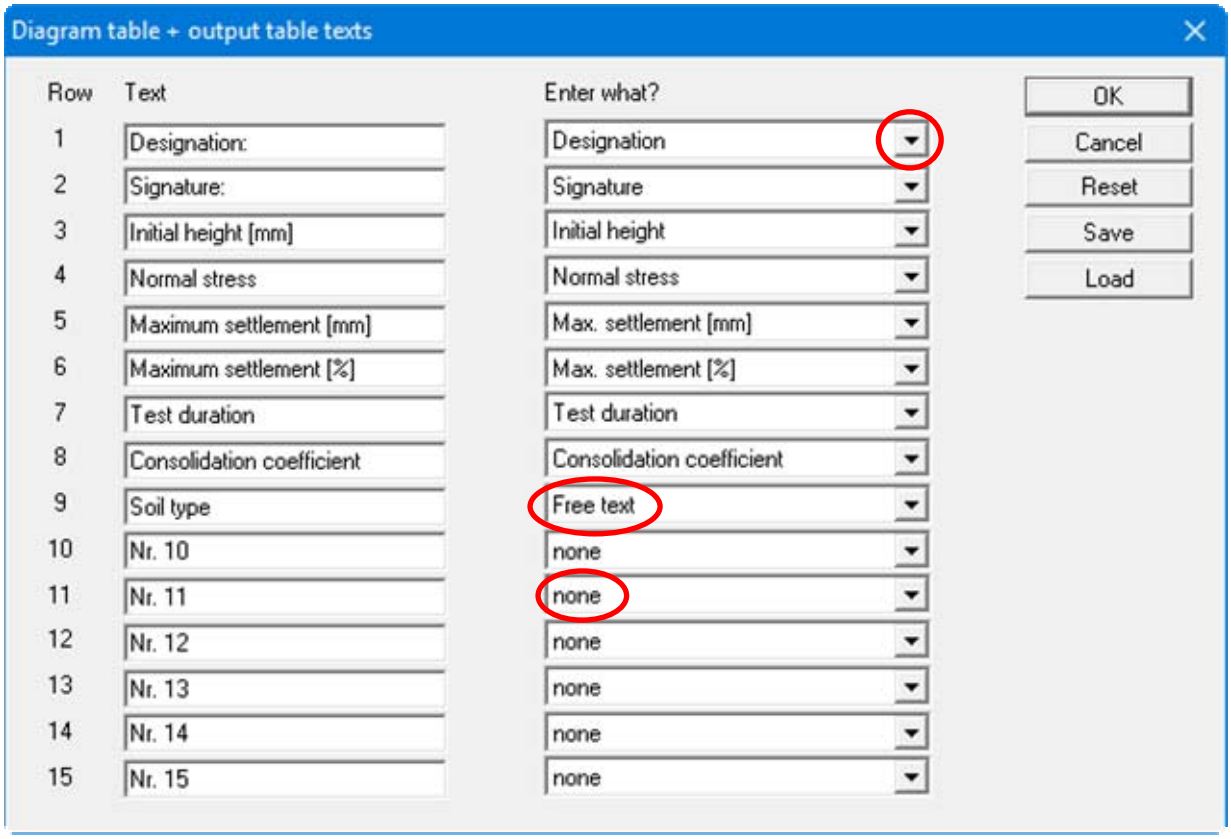
Your input in rows 1 to 6 of the above dialog box, as well as the input for "**Report:**" and "**Annex:**" also represent the designations for the input boxes in the "**Edit/General**" menu item dialog box. If rows are deactivated in the above dialog box, the corresponding input boxes in the "**Edit/General**" menu item dialog box are also deactivated (see Section 5.2.4).

Use "**Reset**" to restore the default labelling settings. If you have retroactively changed the language you will see the internal program translations in the input boxes.

A dialog box opens after pressing the "**Diagram texts**" button, allowing the x- and y-axes labelling for the time-settlement diagram to be edited. Here, too, the default labelling can be restored using the "**Reset**" button.

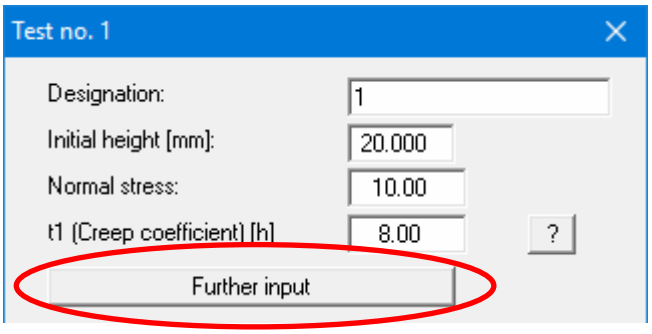
In the "**Diagram table**" group box in the above "**Texts + table**" dialog box the required texts, text allocations and type of visualisation can be edited.

- "**Edit texts and allocation**"
  A dialog box opens for specifying the parameters and properties to be displayed in the diagram table. It is possible to display up to a maximum of 15 rows. The sequence corresponds to the numbering in the following dialog box.



In the "**Text**" boxes a text must be entered by hand which is later used as a description. After clicking the arrows in the "**Enter what?**" column the values or text in the drop-down list entered or determined by the program can be allocated to the to the rows of the diagram table. Rows with a "**None**" allocation are not displayed.

If information needs to be added to the table that is not found in the default texts in the table, a "**Free text**" can be used. In the "**Edit/Tests**" menu item you will then see an additional "**Further input**" button and can enter text according to your requirements in the dialog box.

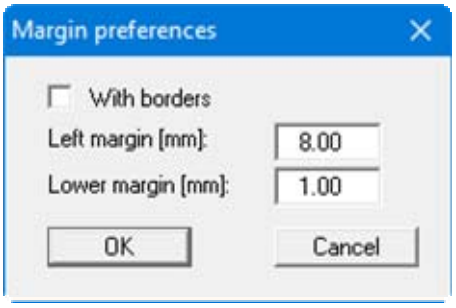


The "**Reset**" button resets the labelling and allocations of the results table to the defaults. If you have retroactively changed the language you will get the internal program translations. Your texts and allocation can be saved in a "***.ktx**" file using the "**Save**" button and opened again using the "**Load**" button. In addition, you can specify whether the current texts and properties allocations

- "**Edit widths**"
  If the table is arranged vertically, a fixed width for each column can be defined using this button. Please note, however, that the total width of the table needs to fit into the layout of your output sheet. In order to achieve a uniform distribution within the specified total width, e.g. as defined using [**F11**], click the "**All the same width**" button.
- "**Arrange horizontally**"/"**Arrange vertically**"
  This command button defines the alignment of the diagram table.

5.4.3 "Margins" menu item

In the default program preferences the form is shown with cutting borders. For output to an A4 printer, a reduction of the printer output is generally necessary, as proprietary printers cannot fully cover an A4 page. The margin preferences can be defined in the following dialog box.



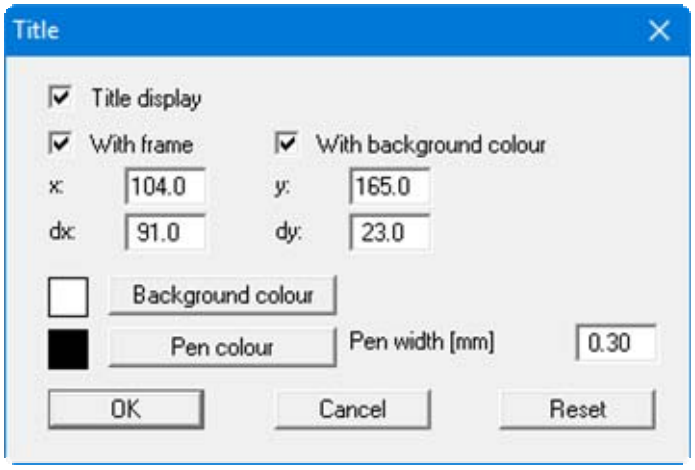
By deactivating the "**With borders**" check box and with an appropriate choice of left and lower margins, it is generally possible to create a non-reduced printer output. It is necessary to also adapt the page height and width (see Section 5.4.1).

5.4.4 "Position info" menu item

The positions and layout of the individual elements on the output sheet can be altered using the following menu items. This menu item provides information on the options for altering the position and layout more quickly using the mouse.

5.4.5 "Title (change position)" menu item

The position and layout of the title element can be altered via the dialog box for this menu item, if the "**Title display**" check box is activated.



The position of the element on the output sheet and its size can be defined or edited by means of the variables "***x***" and "***y***", "**dx**" and "**dy**". The element can be provided with a frame and a background colour to suit your personal requirements. If the element needs to be returned to its original condition, this can be done using the "**Reset**" button. Alternatively, you can alter the size and shape of the element using the mouse (see menu item "**Output preferences/Move objects**", Section 5.4.16).

The heading "**Time-settlement graph**" shown in the title element can be edited in the menu item "**Output preferences/Texts + table**", "**Output sheets texts**" button (see Section 5.4.2). The texts "**Project (1st line)**" to "**Project (3rd line)**" are entered immediately after double-clicking the element or using the menu item "**Edit/General**" (see Section 5.2.4).

5.4.6 "Time-settlement graphs" menu item

Almost exactly the same dialog box opens with the same preference options as that described in the "**Output preferences/Title (change position)**" menu item (see Section 5.4.5). Because the time-settlement graphs are the central graphical element, it cannot be switched off. Proceed as described above to alter the position or layout of the "**Time-settlement graphs**" element.

5.4.7 "Company" menu item

Almost exactly the same dialog box opens with the same preference options as that described in the "**Output preferences/Title (change position)**" menu item (see Section 5.4.5). Simply proceed as described there to edit the "**Company**" element.

The input for this element can be edited immediately after double-clicking on the element or via the menu item "**Edit/Company**" (see Section 5.2.6).

5.4.8 "Test no. etc." menu item

Almost exactly the same dialog box opens with the same preference options as that described in the "**Output preferences/Title (change position)**" menu item (see Section 5.4.5). To edit the "**Test no. etc.**" element, simply proceed as described there.

The input for this element can be edited immediately after double-clicking on the element or via the menu item "**Edit/General**" (see Section 5.2.4). For this element you also have the option of adapting the texts in front of the input boxes to suit your needs. Go to the menu item "**Output preferences/Texts + table**", "**Output sheets texts**" button (see Section 5.4.2).

5.4.9 "Annex and report" menu item

Almost exactly the same dialog box opens with the same preference options as that described in the "**Output preferences/Title (change position)**" menu item (see Section 5.4.5). To edit the "**Annex and report**" element, simply proceed as described there.

The input for this element can be edited directly by double-clicking the element or by going to the menu item "**Edit/General**" (see Section 5.2.4). For this element you also have the option of adapting the texts in front of the input boxes to suit your needs. Go to the menu item "**Output preferences/Texts + table**", "**Output sheets texts**" button (see Section 5.4.2). In addition, the report and annex numbers can be rotated by 90° in the diagram view, if the "**Annex and report**" element is opened directly by double-clicking.

5.4.10 "Remarks" menu item

Almost exactly the same dialog box opens with the same preference options as that described in the "**Output preferences/Title (change position)**" menu item (see Section 5.4.5). To edit the "**Remarks**" element, simply proceed as described there.

The input for this element can be edited immediately after double-clicking on the element or via the menu item "**Edit/Remarks**" (see Section 5.2.7).

5.4.11 "Edited by + date" menu item

Almost exactly the same dialog box opens with the same preference options as that described in the "**Output preferences/Title (change position)**" menu item (see Section 5.4.5). To edit the "**Edited by + date**" element, simply proceed as described there.

The input for this element can be edited immediately after double-clicking on the element or via the menu item "**Edit/General**" (see Section 5.2.4).

5.4.12 "Diagram table" menu item

Almost exactly the same dialog box opens with the same preference options as that described in the "**Output preferences/Title (change position)**" menu item (see Section 5.4.5). To edit the "**Diagram table**" element, simply proceed as described there.

5.4.13 "Output table (test data)" menu item

Almost exactly the same dialog box opens with the same preference options as that described in the "**Output preferences/Title (change position)**" menu item (see Section 5.4.5). To edit the "**Output table (test data)**" element, simply proceed as described there.

5.4.14 "Output table (results)" menu item

Almost exactly the same dialog box opens with the same preference options as that described in the "**Output preferences/Title (change position)**" menu item (see Section 5.4.5). To edit the "**Output table (results)**" element, simply proceed as described there.

5.4.15 "Reset all" menu item

With this button, all preferences for the aforementioned elements, which may have been edited with the previous menu item, will be reset to the program defaults.

5.4.16 "Move objects" menu item

When you go to this item you can move the various objects with the aid of the mouse. Move the mouse over the object to be moved. When you are located above a moveable object the mouse pointer appears in the shape of a cross. You can now press and hold the left mouse button and drag the object to the required position.

> After going to this menu item only one object at a time can be moved using the mouse or its size be altered.
>
> In order to move or edit several objects, this function can be more quickly activated by pressing [**F11**] or the icon.

The size of an object can also be altered using this menu item or the [**F11**] key. If you move over the frame of a changeable object after activating this function the mouse assumed the shape of a double-headed arrow. Hold the left mouse button and move the frame until the object has reached the required size. To retain the ratio of the sides, pull at one corner only. If on one side only is pulled the object will become higher or wider.

The last change made in the position or size of an object can be undone using [**Back**] or by clicking the icon.

5.5.1 "Copyright" menu item

You will see a copyright message and information on the program version number.

The "**System**" button shows information on your computer configuration and the folders used by **GGU-TIMESET**.

5.5.2 "Maxima" menu item

Information on the maximum number of tests possible is displayed in a message box.

5.5.3 "Help" menu item

The **GGU-TIMESET** help is opened as a PDF document. The help function can also be accessed using the [**F1**] function key.

5.5.4 "GGU on the web" menu item

Using this menu item you can access the GGU Software website: www.ggu-software.com.

Get information on updates and modifications on a regular basis from your program module page. You can also subscribe to email notifications, which provide information on all modifications on a monthly basis.

5.5.5 "GGU support" menu item

This menu item takes to the GGU-Software Contact area at www.ggu-software.com.

5.5.6 "What's new?" menu item

You will see information on program improvements in comparison to older versions.

5.5.7 "Language preferences" menu item

This menu item allows you to switch the menus and the graphics from German to English and vice versa. To work in German, deactivate the two check boxes "**Dialoge + Menüs übersetzen (translate dialogues, menus)**" und "**Graphiktexte übersetzen (translate graphics)**".

Alternatively, you can work bilingually, e.g. with German dialog boxes but with graphic output in English. The program always starts with the language setting applicable when it was last ended.

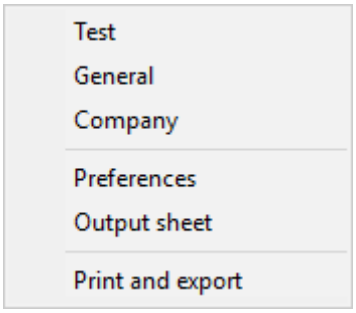
6 Tips and tricks

6.1 Keyboard and mouse

You can scroll the screen with the keyboard using the cursor keys and the [**Page up**] and [**Page down**] keys. By clicking and pulling with the mouse, with [**Ctrl**] pressed, you activate the zoom function, i.e. the selected section will fill the screen. Furthermore you can use the mouse wheel to zoom in/out or scrolling the screen presentation. The following mouse wheel functions are available:

- Mouse wheel up = move screen image up
- Mouse wheel down = move screen image down
- [**Ctrl**] + mouse wheel up = enlarge screen image (zoom in)
- [**Ctrl**] + mouse wheel down = shrink screen image (zoom out)
- [**Shift**] + mouse wheel up = move screen image right
- [**Shift**] + mouse wheel down = move screen image left

If you click the right mouse button anywhere on the screen a context menu containing the principal menu items opens.



By double- clickingthe left mouse button on output sheet elements or **Mini-CAD** objects, the editor for the selected object immediately opens, allowing it to be edited. By double-clicking output sheet elements while holding the [**Shift**] key, the preferences for the position, size and appearance of the element open for editing in the editor.

6.2 Function keys

Some of the function keys are assigned program functions. The allocations are noted after the corresponding menu items. The individual function key allocations are:

- [**Esc**] refreshes the screen contents and sets the screen back to the given format (A4 landscape). This is useful if, for example, you have used the zoom function to display parts of the screen and would like to quickly return to a complete overview.
- [**F1**] opens the manual file.
- [**F2**] refreshes the screen without altering the current magnification.
- [**F11**] activates the menu item "**Output preferences/Move objects**".

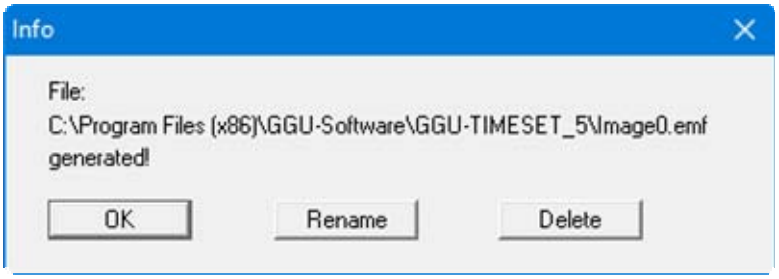
6.3 "Copy/print area" icon

A dialog box opens when the "**Copy/print area**" icon in the menu toolbar is clicked, describing the options available for this function. For example, using this icon it is possible to either copy areas of the screen graphics and paste them into the report, or send them directly to a printer.

In the dialog box, first select where the copied area should be transferred to: "**Clipboard**", "**File**" or "**Printer**". The cursor is displayed as a cross after leaving the dialog box and, keeping the left mouse button pressed, the required area may be enclosed. If the marked area does not suit your requirements, abort the subsequent boxes and restart the function by clicking the icon again.

If "**Clipboard**" was selected, move to the MS Word document (for example) after marking the area and paste the copied graphics using "*Edit/Paste*".

If "**File**" was selected, the following dialog box opens once the area has been defined:



The default location of the file is the folder from which the program is started and, if several files are created, the file is given the file name "**Image0.emf**" with sequential numbering. If the "**Rename**" button in the dialog box is clicked, a file selector box opens and the copied area can be saved under a different name in a user-defined folder. Saving can be aborted by pressing the "**Delete**" button.

If the "**Printer**" button was pressed in the first dialog box, a dialog box for defining the printer settings opens after marking the area. Following this, a dialog box for defining the image output settings opens. After confirming the settings the defined area is output to the selected printer.

7 Index

A

Alignment, edit for diagram table 25
Annex number,
  edit output sheet element 27
  enter 15
  generate for output sheets 15
  rotate by 90° 27
ASCII data,
  export 7
  import automatically 7
  import manually 13
Axes scaling, time-settlement graphs 18

B

Borders, turn on/off 25

C

Clipboard 9
Colours, define for time-settlement graphs 20
Column width, edit for vertical diagram table .. 25
Company,
  edit output sheet element 27
  enter address 16
Context menu, open 30
Control parameter,
  smoothing time-settlement graphs 18
Copy/print area 9, 21, 31

D

Diagram header,
  edit input box texts 23
  enter 14
Diagram table,
  define entries 24
  edit alignment 25
  edit output sheet element 28
  edit text allocation 24
  load/save text allocation 25
DXF file,
  export 8
  import 4

E

Editing data,
  edit output sheet element 27
  enter 14
EMF format 9

F

File, load/save 6
Font selection 19
Font size, define for various input areas 19
Free text,
  define input box in diagram table 25
  define superscripts or subscripts 12
  enter 12
Function keys 30

G

GGU-CAD file, export 8
GGUMiniCAD file, export 9
Graphics, add via Mini-CAD 20

I

Initial height, enter 12

L

Language preferences 4, 29
Licence protection 4

M

Manual, open as PDF file 29
Marker, edit settings 17
Measured data, display 18
Metafile, export 9
Mini-CAD,
  application explanations 20
  export file 9
Mouse click functions 30
Mouse wheel functions 30

N

Normal stress, enter 12

O

Output preferences 7, 8
Output sheet,
  alter position/size of individual elements
    using mouse 26, 28
  change name 23
  edit title element 26
  reset all elements to defaults 28
  reset individual elements to defaults 26
Output table,
  activate display 16
  edit results legend layout 28
  edit table layout 28

P

Page,
  copy/print section 21, 31
  define format 23
  define margins 25
PDF file, import via Mini-CAD 4, 20

Pen preferences,
edit for time-settlement graphs 20
Print,
graphics 8
section 9, 21, 31
several files 10
Program,
load/save preferences 22
show improvements 29
show information 29
Project data,
edit output sheet element 26
enter 14

R

Remarks,
edit output sheet element 27
enter 16
Report number,
edit output sheet element 27
enter 14
rotate by 90° 27

S

Sample data,
edit input box texts 23
edit output sheet element 27
enter 14
Scroll the screen 30
Single test, delete/duplicate 13
Smart icons, menu items 21
Smoothing out methods,
time-settlement graphs 18
Status bar main program, activate 21
Subscripts, use in diagram table 12
Superscripts, use in diagram table 12
System, show information 29

T

Test data,
export to ASCII file 7
import as ASCII file 7, 13
Test numbers, for visualisation sequence 11
Tests,
delete all 14
delete/duplicate single test 13
display maximum number 29
specify visualisation sequence 11
swap visualisation sequence 14
Texts in diagram header, enter/edit 23
Texts in diagram table, enter/edit 24
Time-settlement graphs,
activate display 16
edit axes scaling 18
edit output sheet element 26
edit pen preferences 20
smoothing out methods 18
Time-settlement tests, load together 6
Toolbar, edit for menu items 21
Translation,
activate 29
display retroactively for output sheet texts ... 24
display retroactively in result table 25
True-type font 19

V

Version number, show 29

W

What you see is what you get 19

Z

Zoom factor, define for full-screen display 19
Zoom function, activate 19, 21, 30