

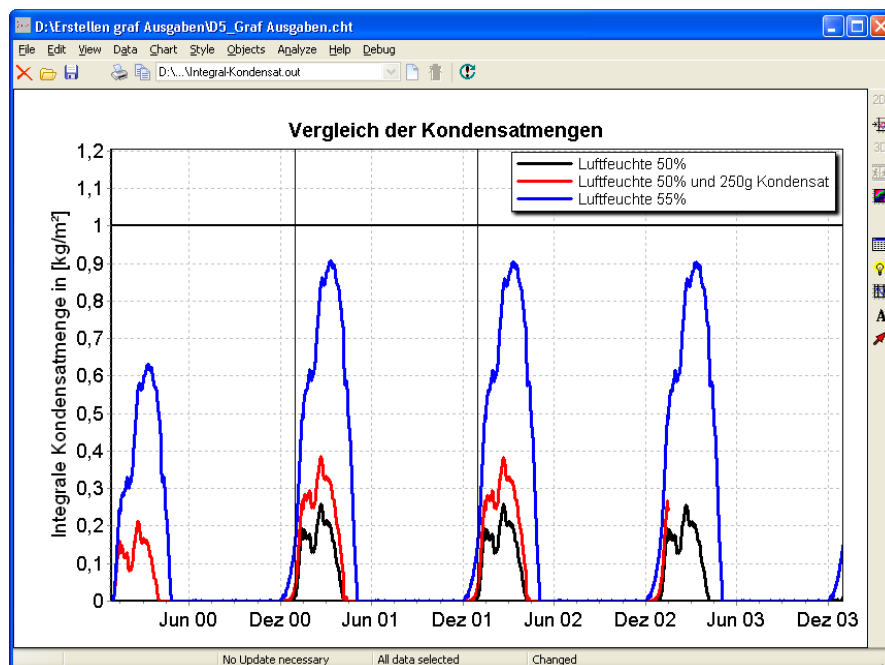
Creating graphical outputs

This tutorial deals with the postprocessor of DELPHIN 5. This is contained in DELPHIN 6 as well and can be set as default postprocessor >> Edit >> Preferences >> External Tools: External Postprocessing.

Graphs of state variables

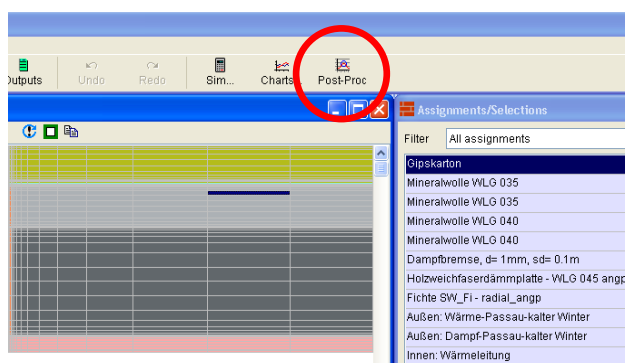
The DELPHIN-Postprocessor provides manifold possibilities to customize graphical outputs to own conceptions. This tutorial explains how

- the postprocessor is started and result data are selected,
- chart headlines are customized,
- multiple lines are displayed in one chart,
- a legend is added and the appearance and labelling of single lines is customized,
- axes and labelling of axes are customized and
- supplemental lines are added.

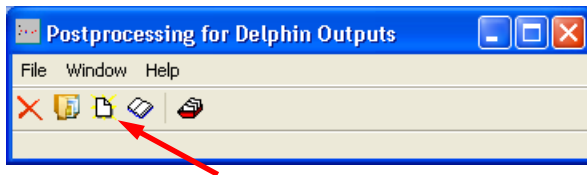


Starting the postprocessor and selection of results

Start the external postprocessor by clicking on the corresponding symbol in DELPHIN5.



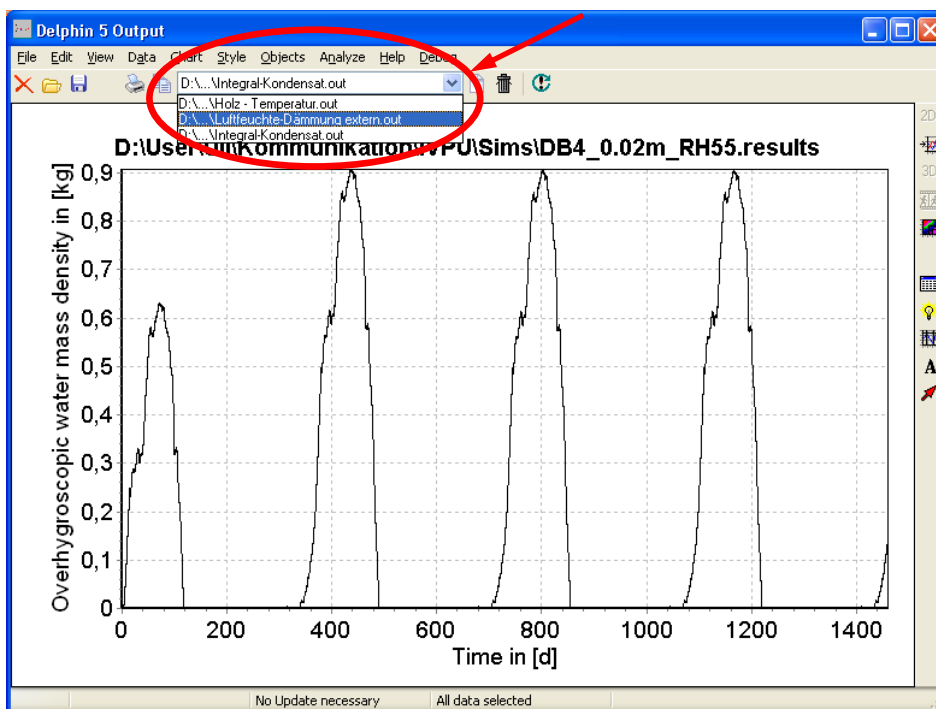
Thereupon the postprocessor will open. To open result data click on the button „New Chart from Data File“.



A conventional Windows dialog will open. Choose the desired data. If you want to work on more than one file from the result folder, keep pushing <Strg> resp. <Shift> while clicking on the files.

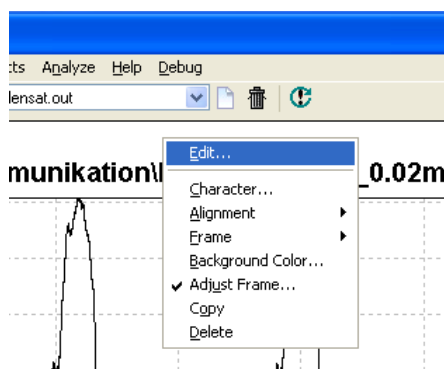
If more than one file has been chosen DELPHIN assigns result data with identical units, e.g. °C or kg, to one chart.

In the so called „chart“-view several charts can be regarded and edited by choosing the corresponding chart in the drop-down menu.

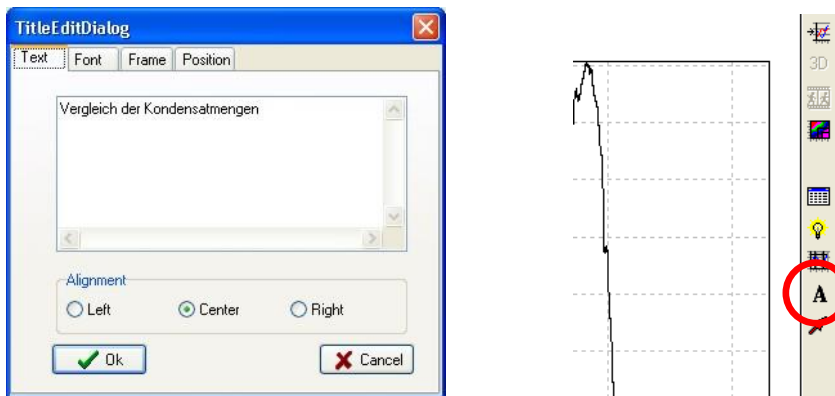


Customizing chart headlines

With a right-click ON the chart headline you have access to the headline dialog, alternatively with >> Style >> Title, too. If you intend not to display a headline choose after right-clicking on the headline >> Delete.



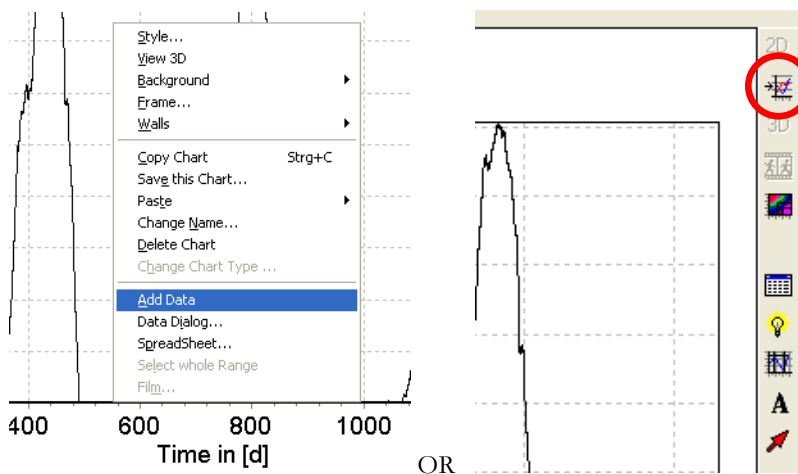
By choosing >> Edit after a right-click on the headline a dialog appears where the labelling and some other settings regarding the headline can be changed. Confirm your changes with a click on >> OK.



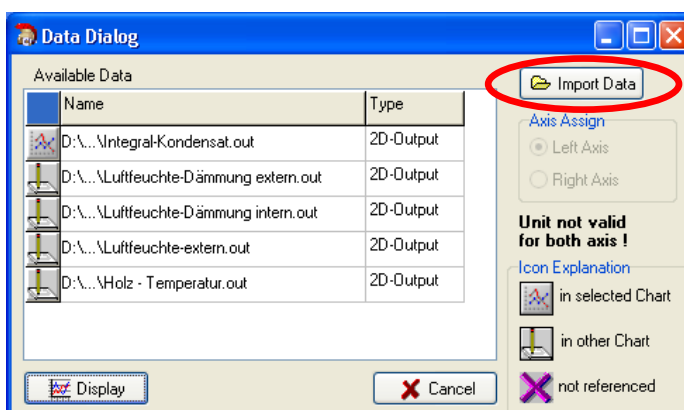
To display any text at any place in the chart you may open the DELPHIN text editor (right picture). But to guarantee a consistent typeface, headlines may be added better within the word processing program.

Displaying multiple lines

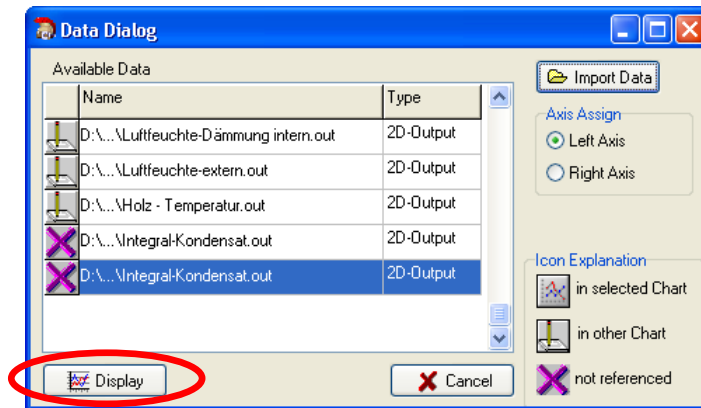
To display more than one line in one diagram or to add a new line choose neither >> Data >> Add Data or right-click on the diagram but NOT on axes, axes labelling or lines, and choose >> Add Data. Another possibility is a click on the button in the toolbar (right picture).



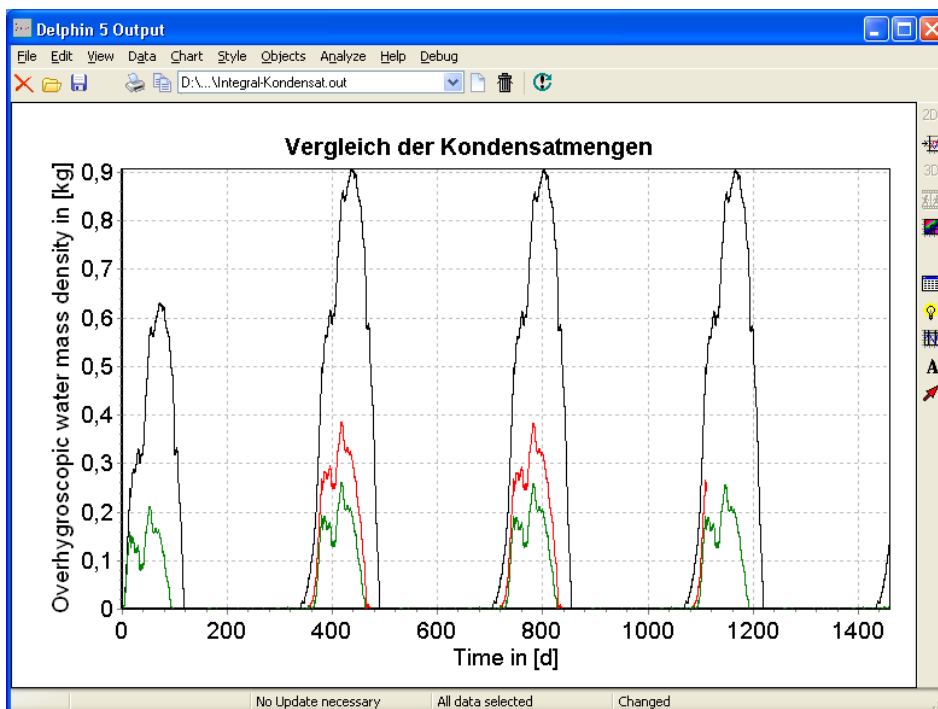
The Data Dialog pops up showing which data are stored in ALL charts of the outputfile. With a click on >> Import Data more result files can be loaded.



If you import more data, these are not displayed automatically in the chart currently opened. Therefore, a violet cross on the left of the new imported list entries is visible. To assign them to the opened chart view, choose the chart in the list and click on >> Display. To choose resp. display more than one file use the <Shift> button.

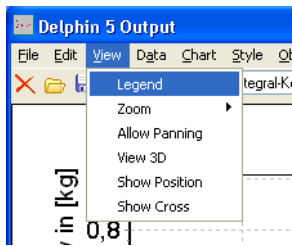


After importing and displaying two more graphs the following postprocessor output can be seen within this example, the headline has been changed in the previous chapter:



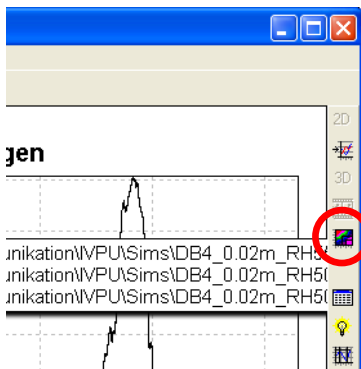
Adding a legend and customizing appearance and labelling of single lines

A legend can be mapped with >> View >> Legend. If you left-click on the legend and keep the button pressed, the legend can be moved to any place in the chart.

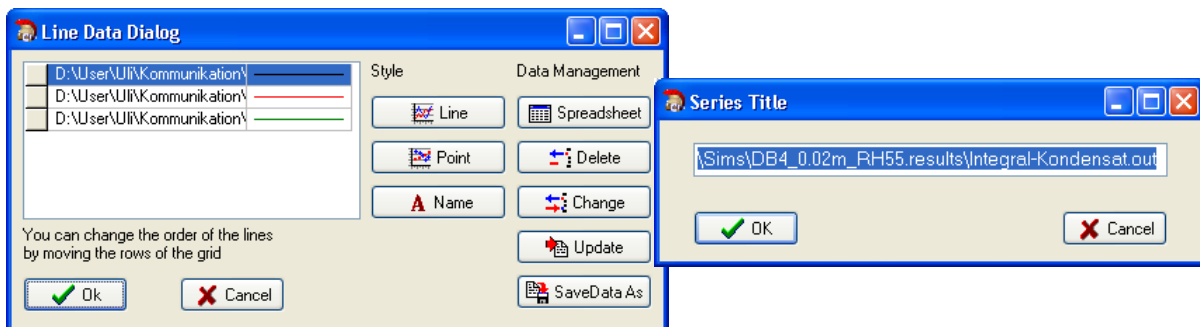


To customize the general defaults of the legend choose after a click on the right mouse button and choose >> Legend Dialog.

If you want to change the labelling of single lines, line width or colour click on the Line Data Dialog in the right vertical bar of the chart view or in the menu bar >> Data >> Line Data Dialog. Depending on the type of the chart there are more possibilities to access this dialog.

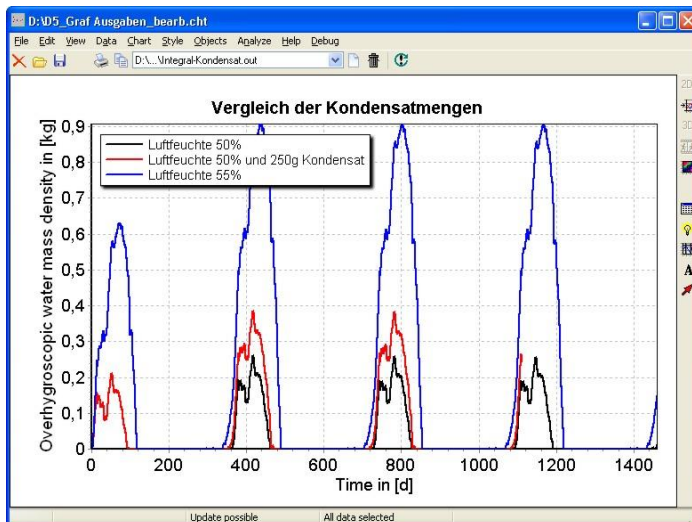


Here you have manifold possibilities to customize graph related settings according to your conceptions. To CHANGE THE LINE LABELLING double-click on the desired graph in the list, change the name and confirm it by clicking on >> OK.



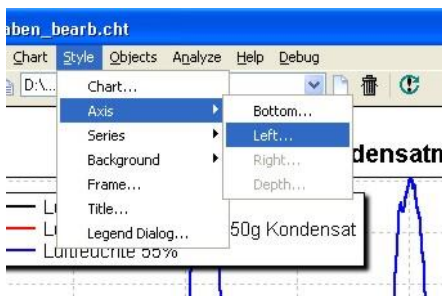
The LINE WIDTH and COLOUR can be changed by clicking on >> Line in the Line Data Dialog. In the dialog >> Point the display of lines can be specified more exactly e.g. whether in place of a continuous line rhombi or circles of different size or colour shall be used.

Via >> Spreadsheet every single stored value at every single output point in time can be revised and, if necessary, changed.

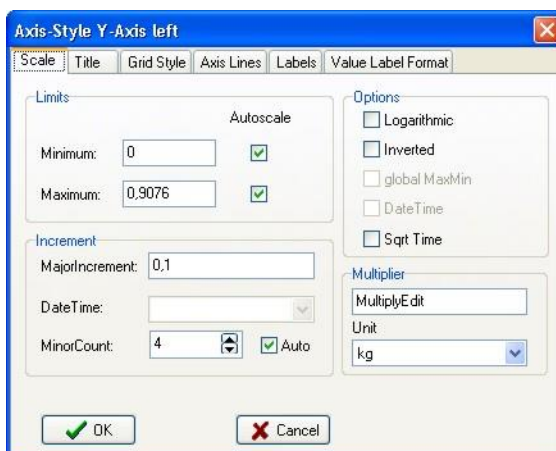


Customizing axes and labelling of axes

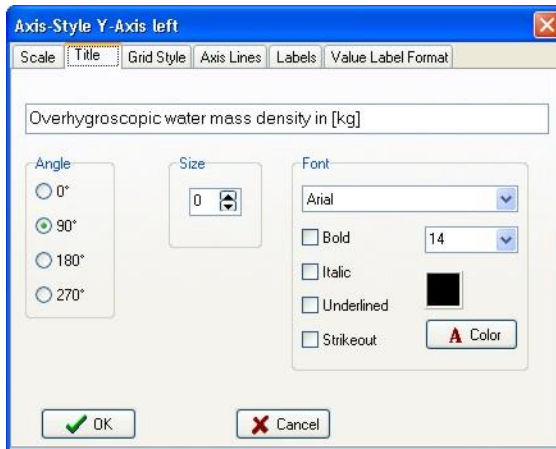
To customize axes labelling, axes section or character etc. you have to access to the favoured axis first. This can be done neither by double or right mouse click on the axes or with >> Style >> Axis >> Top resp. bottom resp....



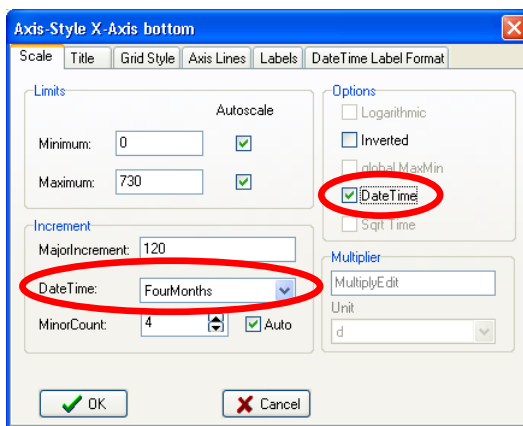
In the first tab „Scale“ MINIMUM AND MAXIMUM VALUES OF AXIS can be adjusted. In the present example the maximum for the y-axis is set on 1.2. Maximum and minimum values are set automatically if >> Autoscale is switched on. In the box „MajorIncrement“ the difference between visible values of the axis division can be defined. If the margin between single numbers becomes too small for displaying them, DELPHIN disregards the user value at „MajorIncrement“ and uses a higher value automatically. >> Logarithmic causes the logarithmic division of the axis, >> Inverted inverts the division.



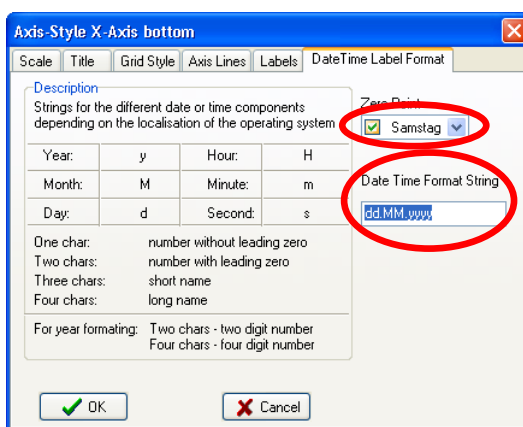
The AXIS LABELING can be changed in the second tab „Title“. Here, in the box „Size“ the MARGIN of the axis labelling to the left border can be customized. A „0“ at „Size“ causes the automatic calculation by the software DELPHIN. This setting sometimes causes at numbers with many decimal places overlapping.



In the same manner modifications of the horizontal x-axis can be carried out. If concrete date display shall be indicated on the x-axis, activate the flag „Data Time“ on the right hand side. The time interval can be chosen on the lower left hand side.

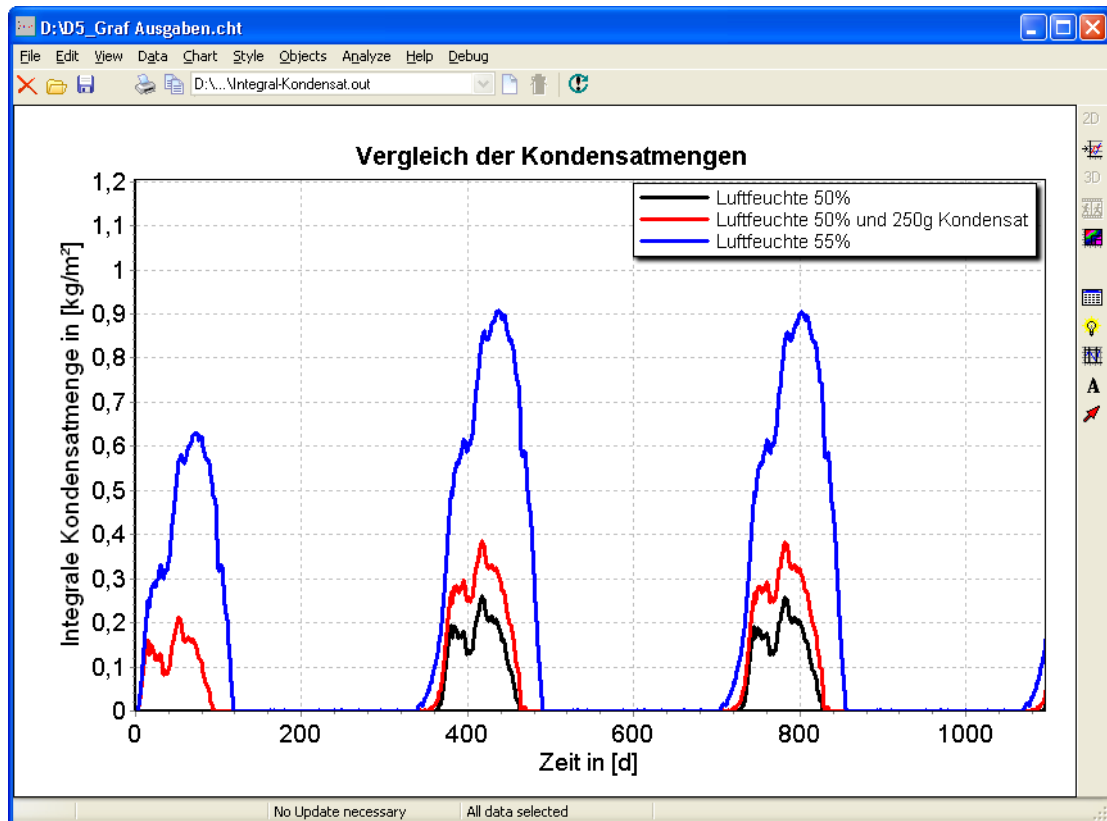


The FORMAT of the date display as well as the SPECIFICATION OF THE FIRST POINT IN TIME can be set in the tab „Date Time Label Format“.



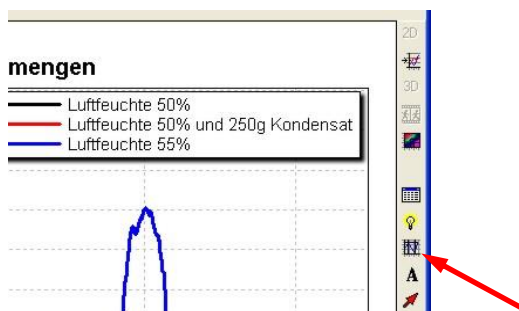
Specification of the first point in time

Format

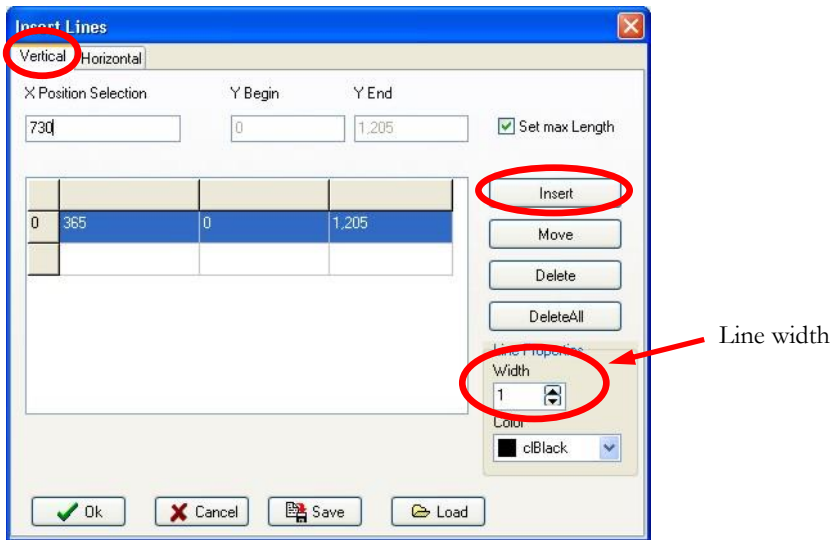


Adding horizontal or vertical lines

Additional horizontal or vertical lines can be added after clicking on the corresponding button in the right vertical bar or with >> Objects >> Included Lines.



For instance, to separate single years more clearly from each other choose the tab „Vertical“. Input at „X Position Selection“ 365 and, to save additional time and effort in input, choose „Set max Length“, if the line shall run on the entire height of the chart. Do not forget to confirm every input with „Insert“, otherwise inputs get lost! It is possible to save and load the whole *collection* of inserted lines. In so doing, lines have not to be drawn in every chart of similar constructions again.



Terminatory, the limiting value of one kilogram per square meter is drawn as horizontal line and slightly thicker:

