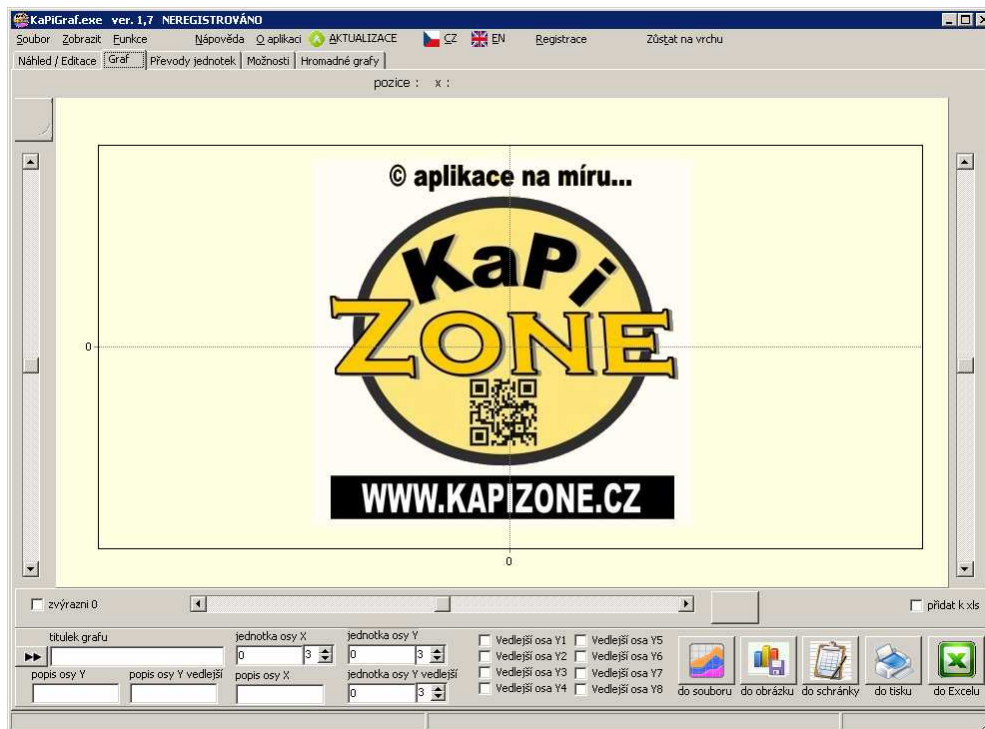


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KaPiGraf – Third Edition Guide

**The third edition does not describe all the possibilities of KaPiGraf.
The procedures described in this guide may not work in all versions of KaPiGraf.**



KaPiGraf after startup

1. Opening data in KaPiGraf

You can load data into KaPiGraf in 3 ways.

1.1. By dragging the mouse (Drag&Drop method)

In the file manager (e.g. Total Commander, Explorer), left-click on the data file and drag the file to the KaPiGraph window while holding down the mouse button. Then release the mouse button.

1.2. Via clipboard (Ctrl+C / Ctrl+V method)

In the file manager (e.g. Total Commander, Explorer), select the data file. Press CTRL+C. Start KaPiGraf and press CTRL+V

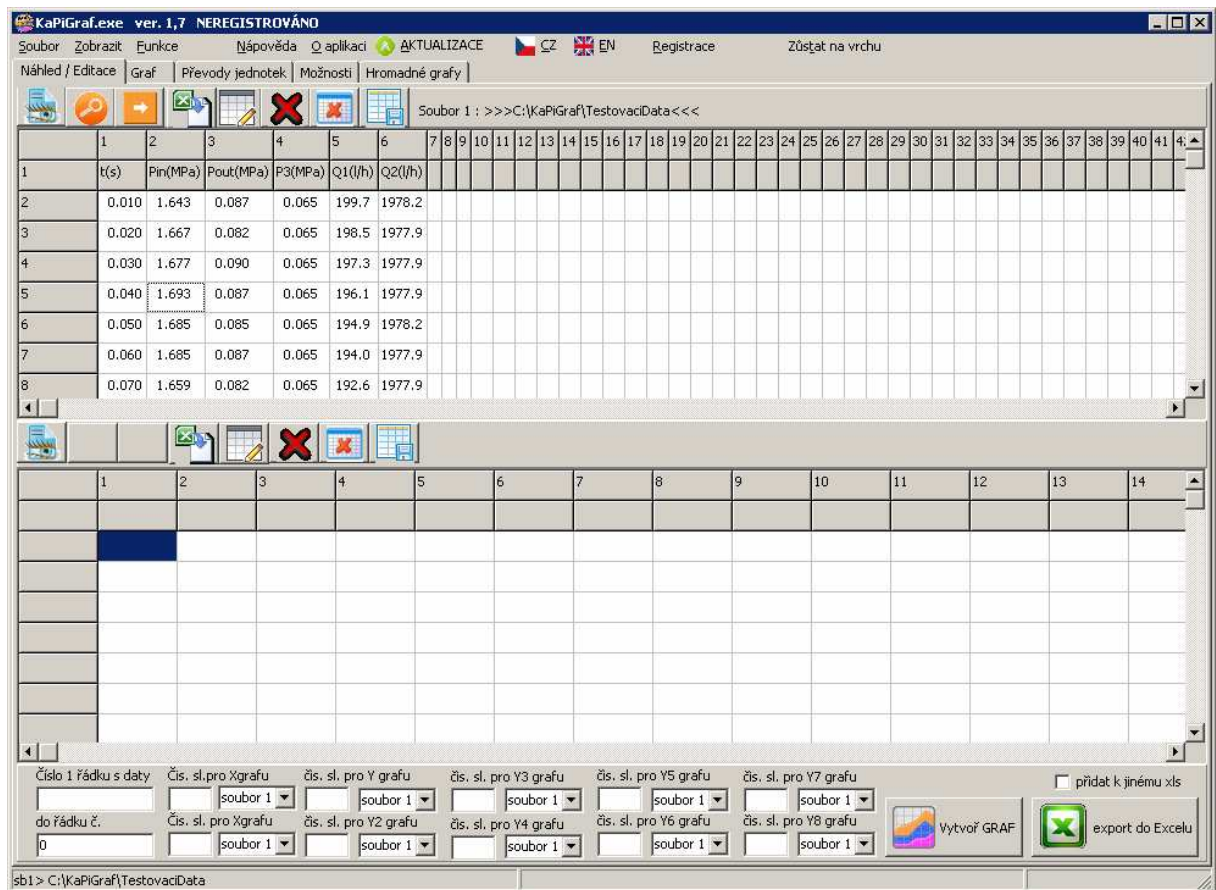
1.3. Selection from the menu (keyboard shortcut F1 / F2)

In KaPiGraf, select File- Open File from the menu (keyboard shortcut F1 / F2) file you want, and then press Open.

After opening the data, the Preview/Edit window will appear.

2. Selecting columns for the chart (Preview / Edit)

For better orientation, the column number is displayed when you move the mouse (E.g. s:3 – column 3) in the bubble help.



KaPiGraf – Preview / Edit

In order to create a chart, it is first necessary to select the data that will be on the X axis, the Y axis and from which row the data begins (i.e. where the data header ends).

There are 4 ways to select columns of data to create a chart.

2.1. Quick Selection (Ctrl + Click / Shift + Click Method)

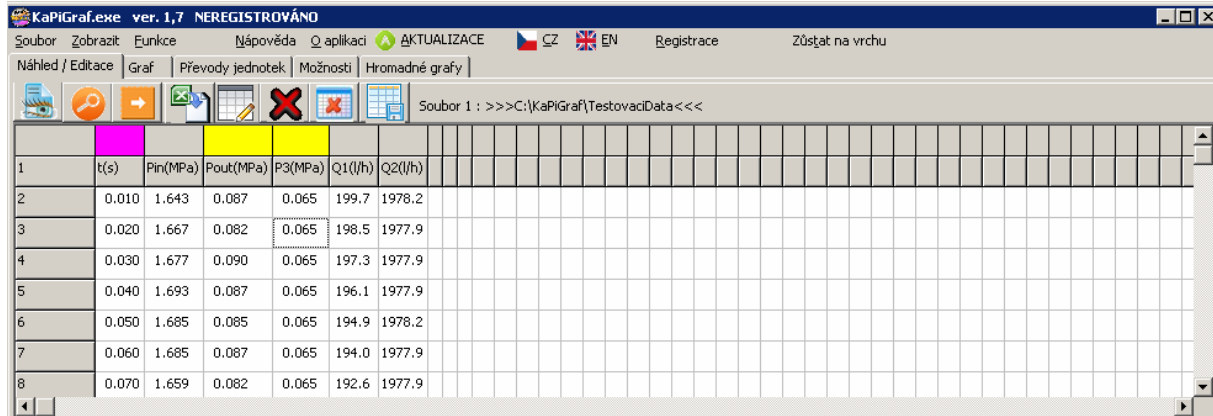
2.2. Mouse selection (right/left mouse reader button)

2.3. Manual Input

2.3.1. Profiles

2.1. Quick Selection (Ctrl+Click / Shift+Click Method)

Press CTRL and click the column you want in the following order: after the X axis, the Y axis.



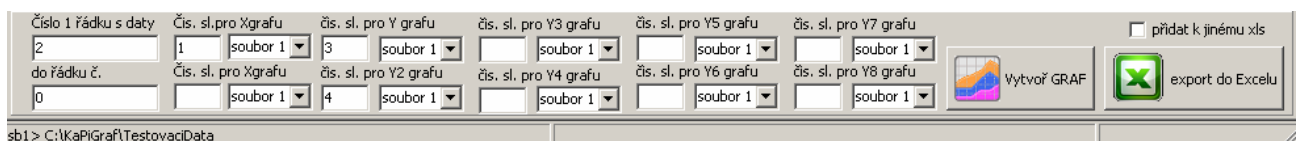
The screenshot shows the KaPiGraf application window with a data table. The table has 8 rows and 7 columns. The first row is a header row. The second row is the first data row. The columns are: t(s), Pin(MPa), Pout(MPa), P3(MPa), Q1(l/h), and Q2(l/h). The columns for Pout(MPa) and P3(MPa) are highlighted in yellow, indicating they are selected. The row for t(s) is highlighted in pink, indicating it is selected.

	t(s)	Pin(MPa)	Pout(MPa)	P3(MPa)	Q1(l/h)	Q2(l/h)
1						
2	0.010	1.643	0.087	0.065	199.7	1978.2
3	0.020	1.667	0.082	0.065	198.5	1977.9
4	0.030	1.677	0.090	0.065	197.3	1977.9
5	0.040	1.693	0.087	0.065	196.1	1977.9
6	0.050	1.685	0.085	0.065	194.9	1978.2
7	0.060	1.685	0.087	0.065	194.0	1977.9
8	0.070	1.659	0.082	0.065	192.6	1977.9

KaPiGraf – Preview – selection marking From the figure it can be seen that the data for the X-axis are in column 1 t(s) and the data for the Y-axis are in column 3 Pout(MPa) and in column 4 P3(MPa).

From the image you can see that the actual data starts from row 2 (because there is a data header on row 1). Press SHIFT , and then click anywhere in row 2. This selects that the data starts from row 2.

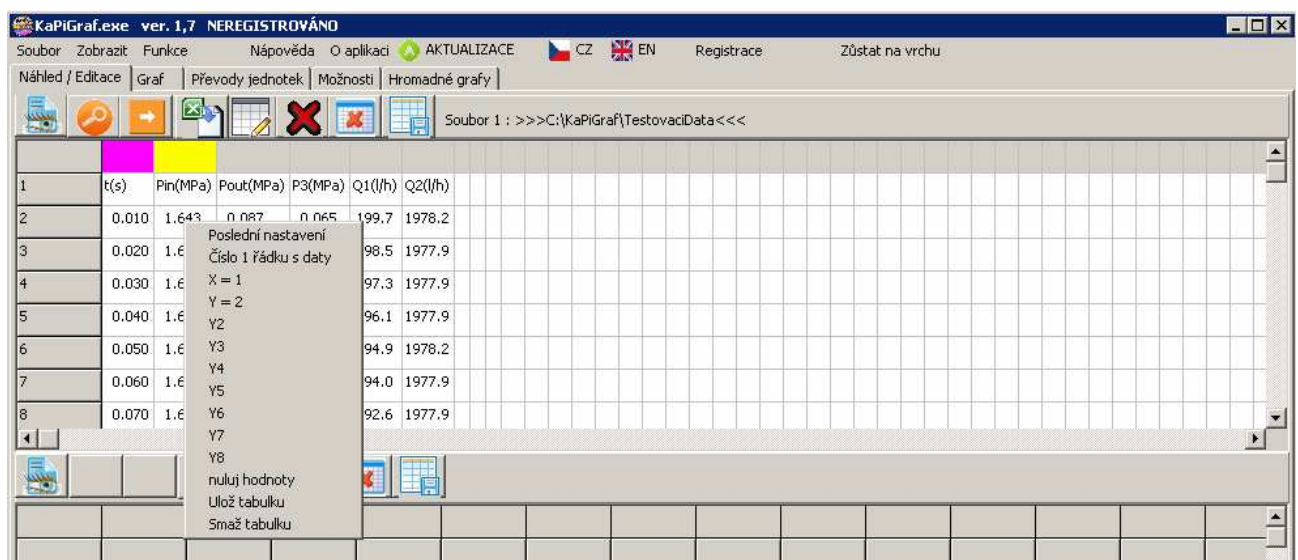
The selected columns are automatically displayed at the bottom of the KaPiChart.



KaPiGraf - Preview - display of selected data

2.2. Mouse selection (right/left mouse button method)

Right-click on the selected column of data and the account ext menu will appear.



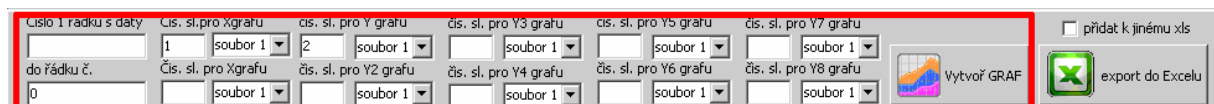
KaPiGraf – Preview – context menu

From the context menu, select with the left mouse button on which axis the selected column will be selected (X axis, Y axis, from which row the data begins (i.e. where the data header ends))

From the figure you can see that we have selected column 1 t(s) as the X axis and the Y axis will be column 2 Pin(MPa). At the same time, the selected columns are color-coded.

2.3. Manual Input

The least convenient is the manual entry of selected columns .



KaPiGraf – Preview – Manual Input

In the appropriate fields at the bottom of the KaPiGraf, after clicking on the appropriate field, it is necessary to enter:

number 1 of the line with data – write the number of the line from which the data starts (i.e. where the header ends) čís.sl. for Xgraf – write the number of the column that will be on the X axis čís.sl. for the Y of the chart – write the number of the column that will be on the Y axis čís.sl. for the Y2 of the chart – write the number of the column that will be on the Y axis

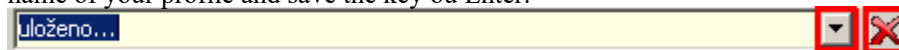
After selecting the columns, press the Create CHART button.

2.3.1. Profiles

Profiles are used to quickly select pre-saved settings to create a chart.

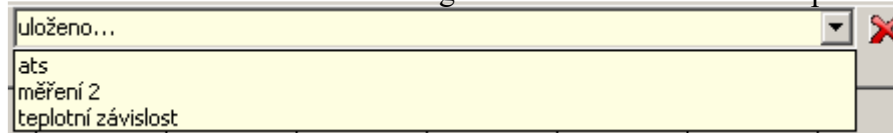
Save a profile

First, select the columns for the chart (see chapters 2.1 – 2.3). Then, in the Select profile box, enter the name of your profile and save the key ou Enter.




Select a profile

Click on the small arrow on the right side and the list of saved profiles will expand.



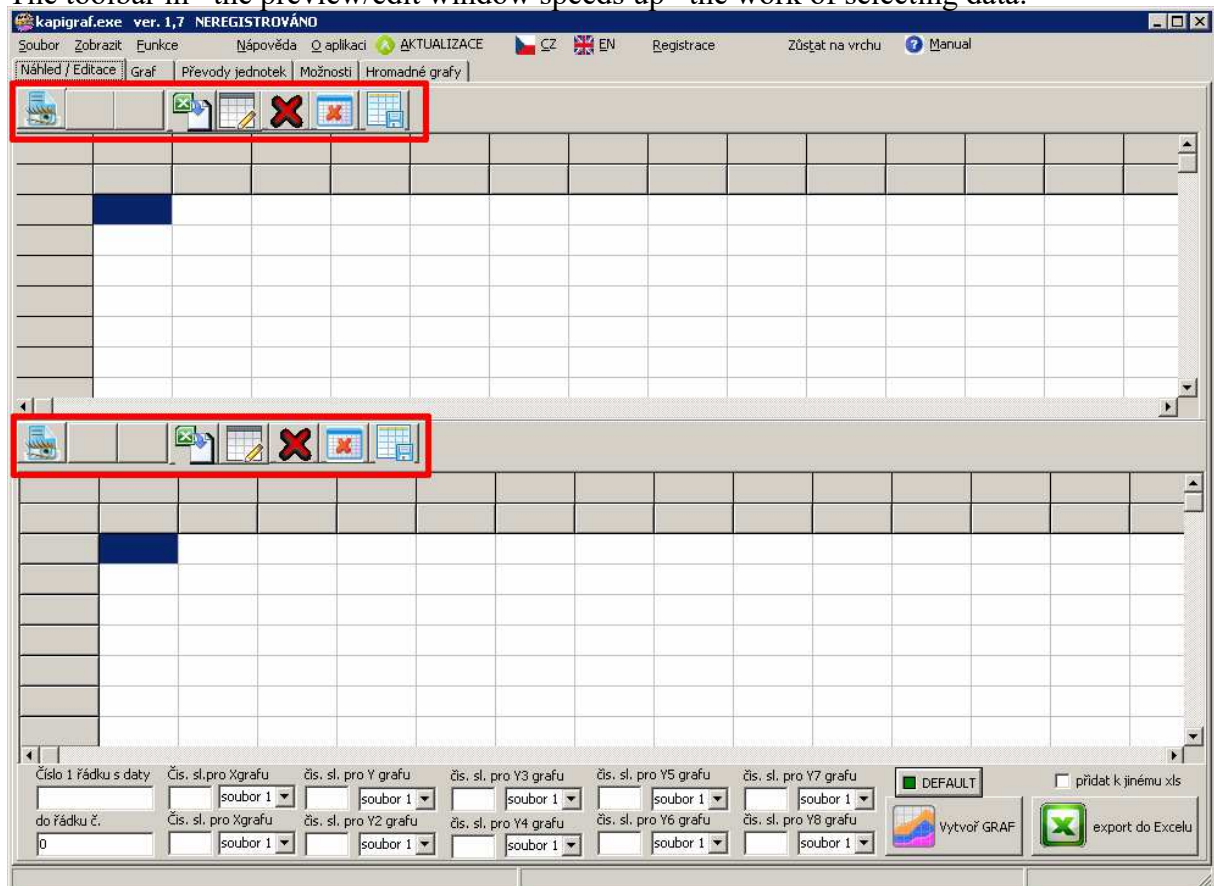
Then, click on the profile you want.

Delete a profile

To delete the currently selected profile, click on the  on the right side.

2.4. Preview / Edit – toolbar

The toolbar in the preview/edit window speeds up the work of selecting data.



KaPiGraf – Preview/Edit – toolbar



Full Preview

When you click this button, the entire selected file will be loaded into a spreadsheet and the total number of rows of data will appear in the upper left corner .

Náhled / Editace Graf Převody jedr			
Dat: 6272		2	3
1	Mk(Nm)	casMk	uhel(°)
2	0.021	6: 0,781	-8.053
3	0.021	6: 0,781	-8.053

Without this button, only 50 rows of data are previewed in the table.



Find

After clicking, a dialog box will appear, where you enter the desired text and confirm with the OK button. The table moves to the place where the searched text first occurs.



Find more...

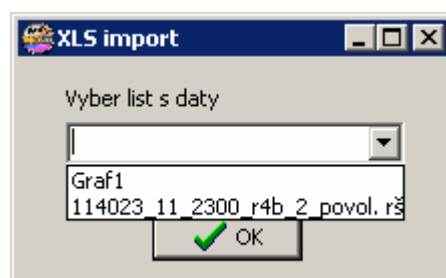
This choice is closely related to the previous Find option. After clicking on this button, the reader searches the table further and moves to the next occurrence of the searched text.



Import from Excel

After clicking this button, a dialog box will appear with the Excel file selector (extension xls,xlsx). When you click on the selected Excel file, the data is loaded into a spreadsheet.

If the Excel file contains multiple worksheets, a worksheet selection dialog box appears before loading it into the table. see. Image.



Select a worksheet in an Excel file

Select the datasheet, and then click OK.

If you want to render this data, you must first save it as a text file (data extension) and load it back into a table. The program does not render data directly from the xls file.



Preview / Edit

This button toggles the preview/edit mode.

V Preview mode, you cannot write text to a table. Use this mode to plot the chart.

In the Edit mode, you can write text and use simple mathematical calculations by clicking in the selected cell, see the paragraph Preview / Editing – mathematical calculations.

In edit mode, the name of the data file is highlighted in yellow and all data from the file is automatically loaded into the table.



Reset values

When clicked, all settings for this chart are cleared. (i.e. number 1 of the row with data, column number for the X, Y axis ...)



Delete a table

Deletes the loaded file from the spreadsheet and prepares the spreadsheet to open the next file.



Save a table

Saves data from a table in a text file (data extension). When you click it, a save dialog box appears, where you enter a file name and click Save. By default, the name of the already loaded file is offered.

2.5. Preview/Edit – Mathematical Calculations

V edit mode, you can write text into a table and use simple mathematical calculations . see the picture.

Dat: 2221	1	2	3	4	5	6	7
1	t(s)	Pin(MPa)	Pout(MPa)	P3(MPa)	Q1(l/h)	Q2(l/h)	
2	0.010	1.643	0.087	0.065	199.7	1978.2	=s2+s3
3	0.020	1.667	0.082	0.065	198.5	1977.9	
4	0.030	1.677	0.090	0.065	197.3	1977.9	
5	0.040	1.693	0.087	0.065	196.1	1977.9	
6	0.050	1.685	0.085	0.065	194.9	1978.2	
7	0.060	1.685	0.087	0.065	194.0	1977.9	
8	0.070	1.659	0.082	0.065	192.6	1977.9	

KaPiGraf – Preview / Editing – mathematical calculations

Z figure shows that in column 7 we add up the data from columns 2 and 3.

First, type = in the cell , followed by the letter s (as a column) and the column number .After typing, press **Enter**. After pressing the Enter key for the second time, the count from the selected cell to the end of the entire loaded file occurs.

Similarly, you can enter formulas for subtraction, multiplication, and division.

=s2-s3 =s2*s3 =s2/s3

or =s2*3.14 =15.78-s3

You can rotate the sign by typing =- and the column number

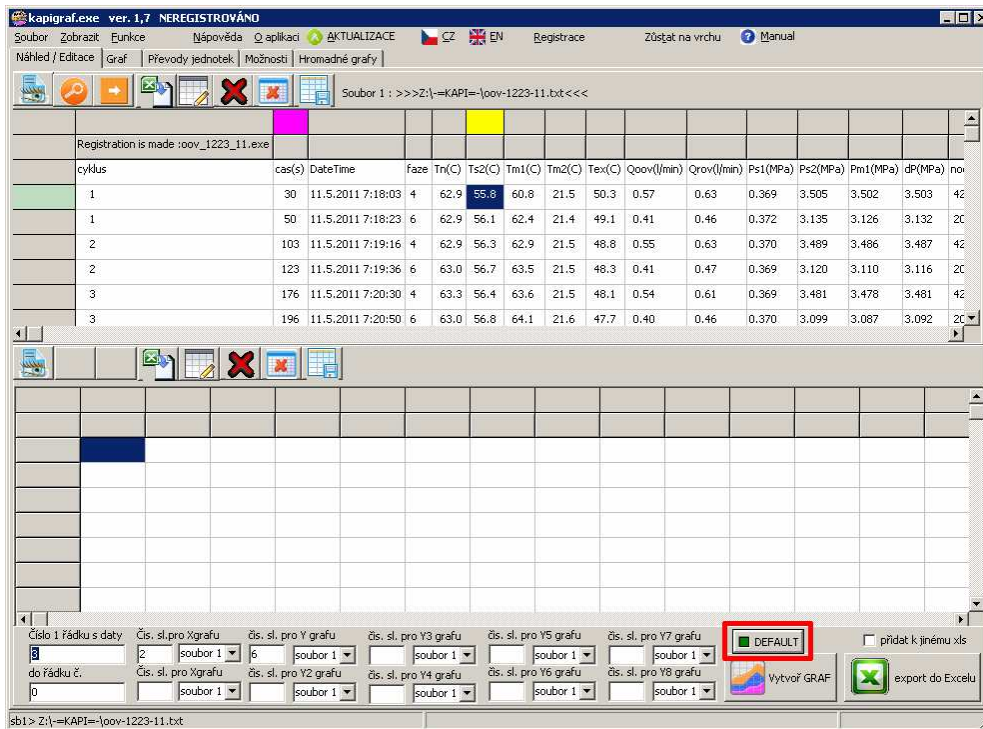
E.g. =-s5 (rotates the signs in column 5) see the picture

Dat: 2221	1	2	3	4	5	6	7
1	t(s)	Pin(MPa)	Pout(MPa)	P3(MPa)	Q1(l/h)	Q2(l/h)	
2	0.010	1.643	0.087	0.065	199,7	1978.2	-199,7
3	0.020	1.667	0.082	0.065	198,5	1977.9	-198,5
4	0.030	1.677	0.090	0.065	197,3	1977.9	-197,3
5	0.040	1.693	0.087	0.065	196,1	1977.9	-196,1
6	0.050	1.685	0.085	0.065	194,9	1978.2	-194,9
7	0.060	1.685	0.087	0.065	194,0	1977.9	-194
8	0.070	1.659	0.082	0.065	192,6	1977.9	-192,6

KaPiGraf – Preview / Edit – change of sign

2.6. Preview / Edit – Default Settings

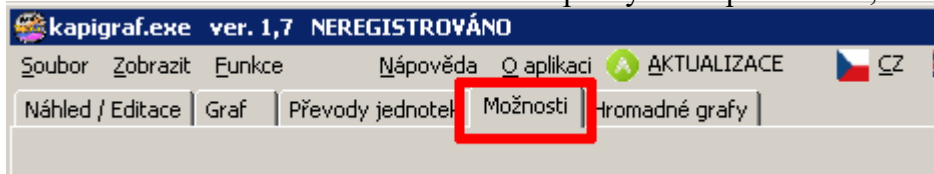
If you need to open data frequently for which you always enter the same setting for the graph identically. column number for the X, Y, number 1 axis of the data row , it is worth using the DEFAULT function. In practice, it looks like you open a file with data in KaPiGraf and immediately display a graph according to the saved (default) settings, not even if you have to do anything.



KaPiGraf – Preview/Edit – default

The button shown in the image is used to save the currently entered values for the graph and at the same time signals a green LED if this function is enabled or turned off.

Turning on/off the DEFAULT mode is done in the Capacity backup window, see the figure.

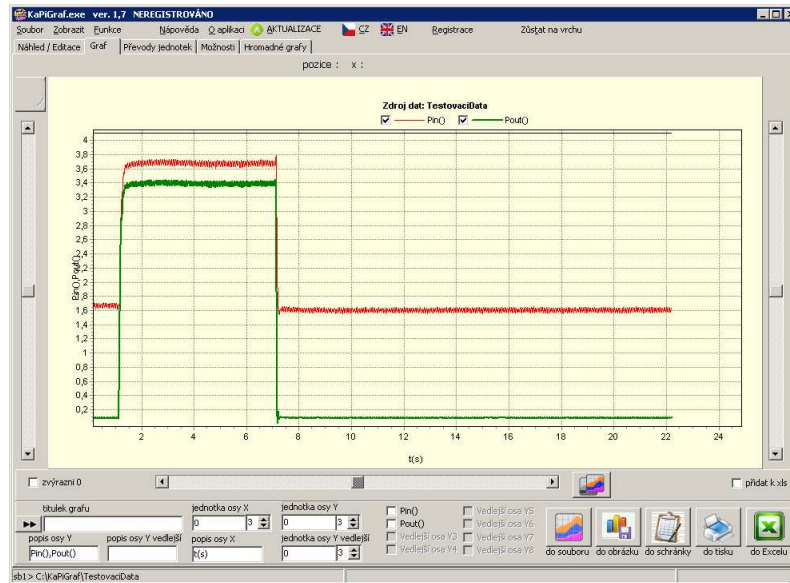


KaPiGraf – options

For a more detailed description, see. chapter Options.

3. Graph

After selecting the columns and pressing the Create CHART button, the chart is displayed.



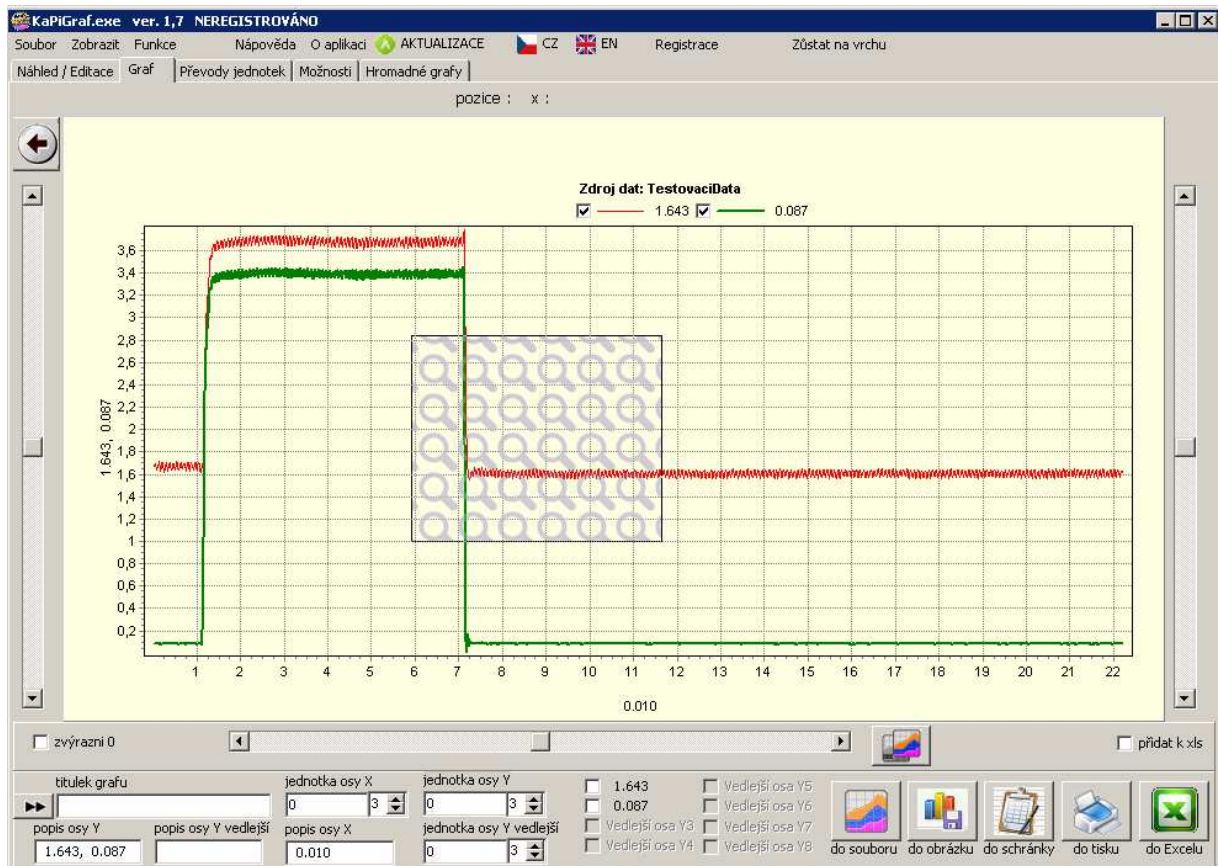
KaPiGraf – Graph

3.1. Working with the graph – Zooming in / Out

The displayed graph can be enlarged / reduced at will.

Zoom (zoom)

Left-click on the graph and hold it down while moving the mouse towards the bottom right corner of the imaginary rectangle (see the bump).



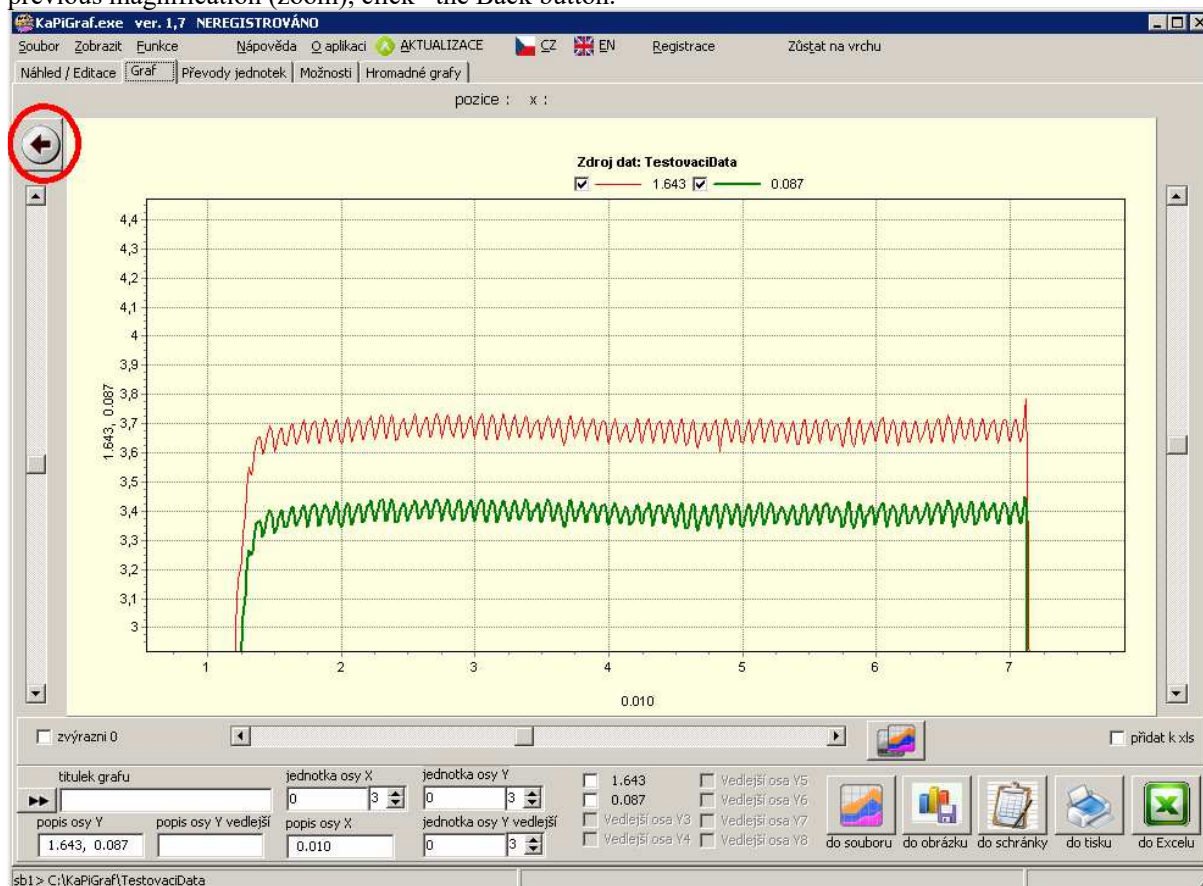
KaPiGraf – Graph – Zoom In/Out

When you release the mouse button, the selected area is enlarged. Repeat the procedure for further clarification .



You can reduce the graph (zoom out) in the opposite way, i.e. click the left mouse button anywhere in the graph and hold it down while moving the mouse towards the upper left corner of the imaginary rectangle.

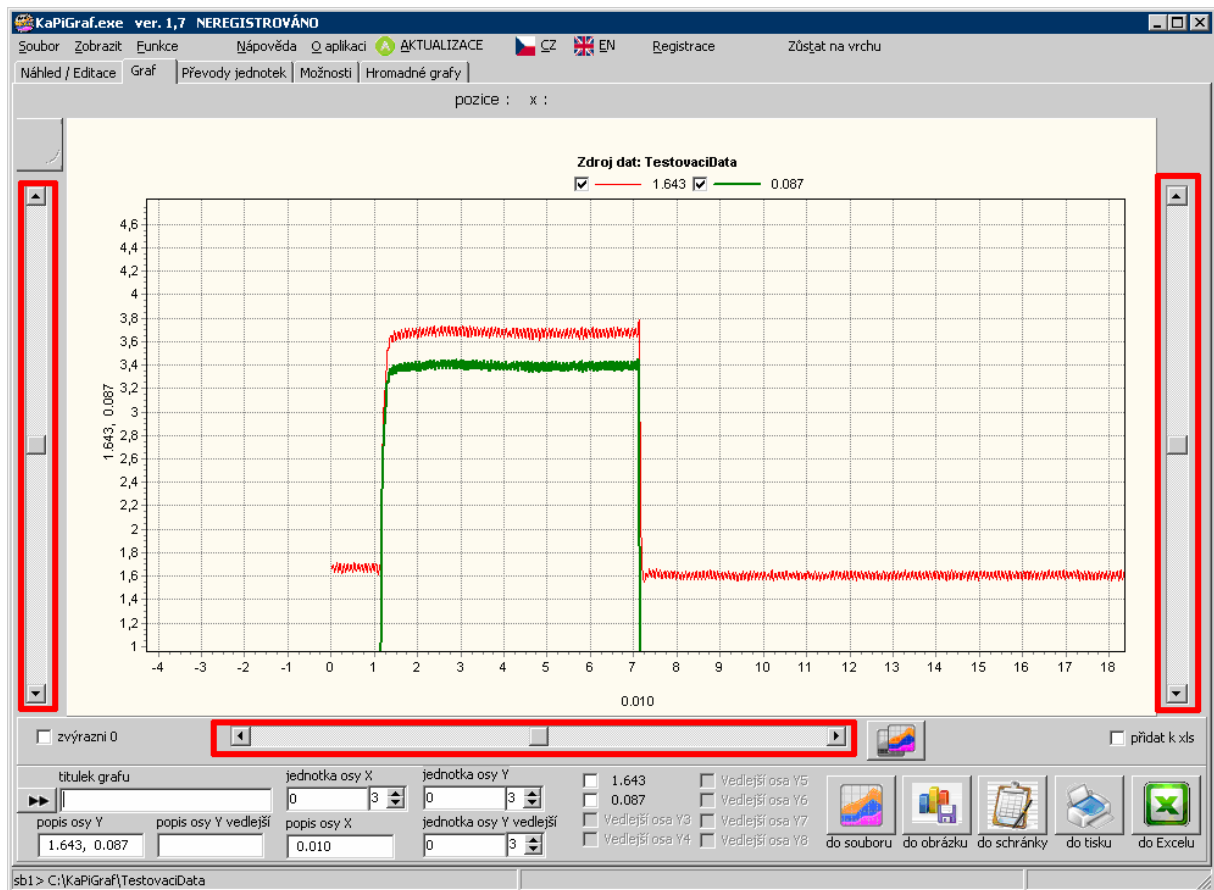
When you release the mouse button, it is reduced (zoomed out). If you need to go back to the previous magnification (zoom), click the Back button.



KaPiGraf – Graph – back button to zoom

3.2. Working with the Chart – Scrolling

You can move the displayed graph (even enlarged) as you wish.



KaPiGraf – Graph – Scrolling (scroll bars)

Right-click on the chart and hold it down while moving the mouse. When you release the mouse button, the graph remains scrolled.

You can also scroll the chart using the scroll bars that are on the left, bottom and right sides of the chart.

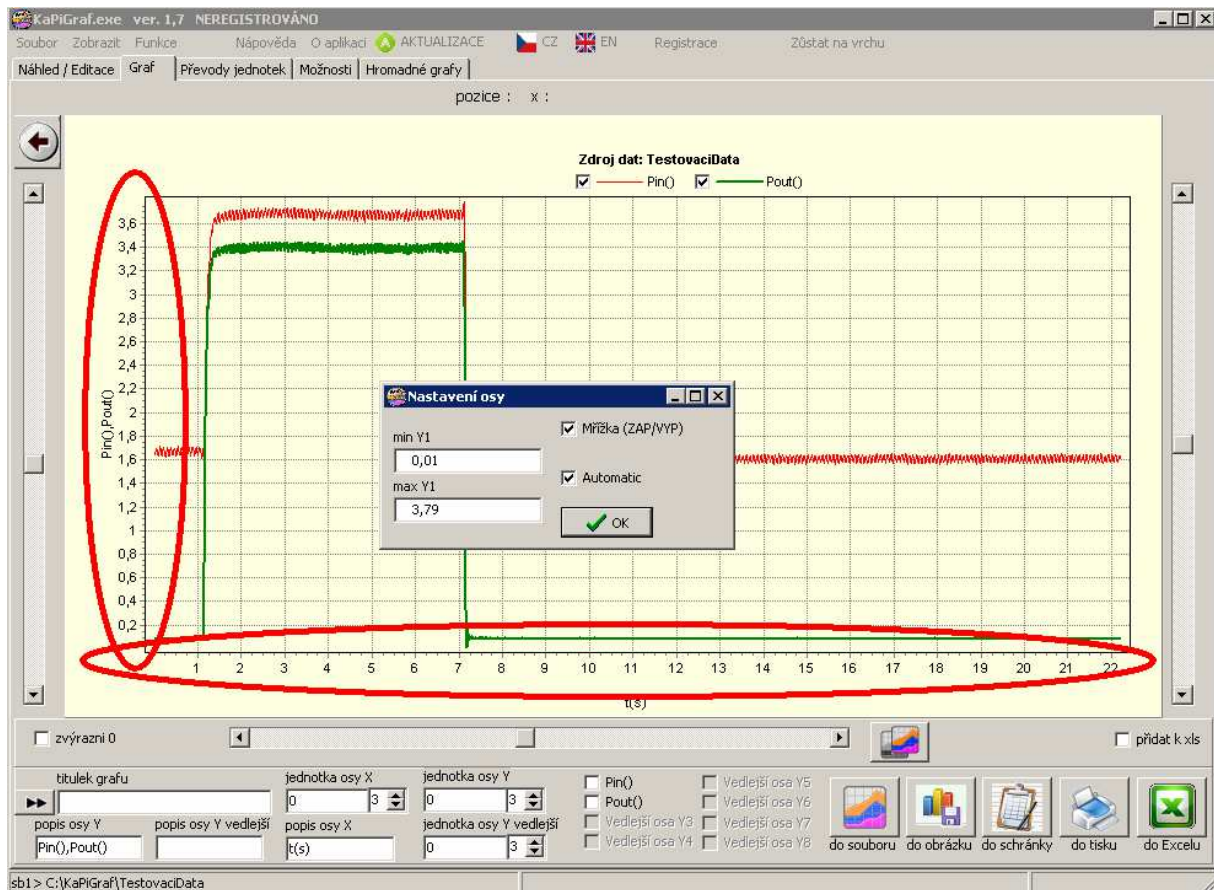


KaPiGraf – Graph – scroll bar

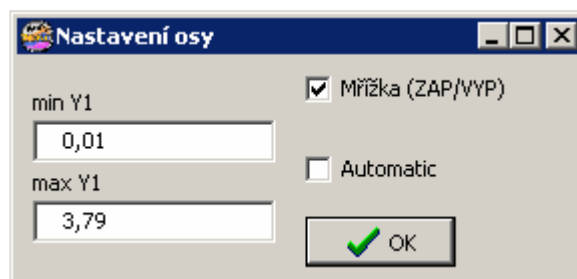
You can click the arrows on the sides of the scroll bars or the rim p on the slider, hold down the left mouse button and move the mouse.

3.3. Working with the Chart – Setting Axes

If necessary, you can adjust the axis settings. Move the mouse to the X or Y axis until the mouse cursor changes to hand and click the X or Y axis to display the Axis Settings window.



KaPiGraf – Chart – axis settings



Axis Settings Window

Legend:

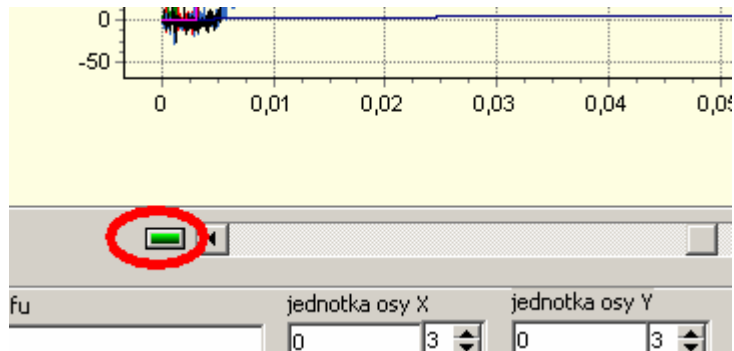
Grid (ON/OFF) – enables/disables the grid display for the given axis (X/Y)

min Y1– minimum value on the selected axis (X /Y) **max Y1** – maximum value on the selected axis (X/Y) **Automatic** – automatic scale of the selected axis

Changing the settings will take effect after clicking on the OK button .

3.3.1. Working with the Chart - Quick Axis Settings

If you need to quickly adjust the axis settings, just use the following procedure. Hover the mouse cursor over the desired axis (x, y) until the mouse cursor changes to a hand. Then right-click (OD selection will be made) and the information LED will turn green as Fig.



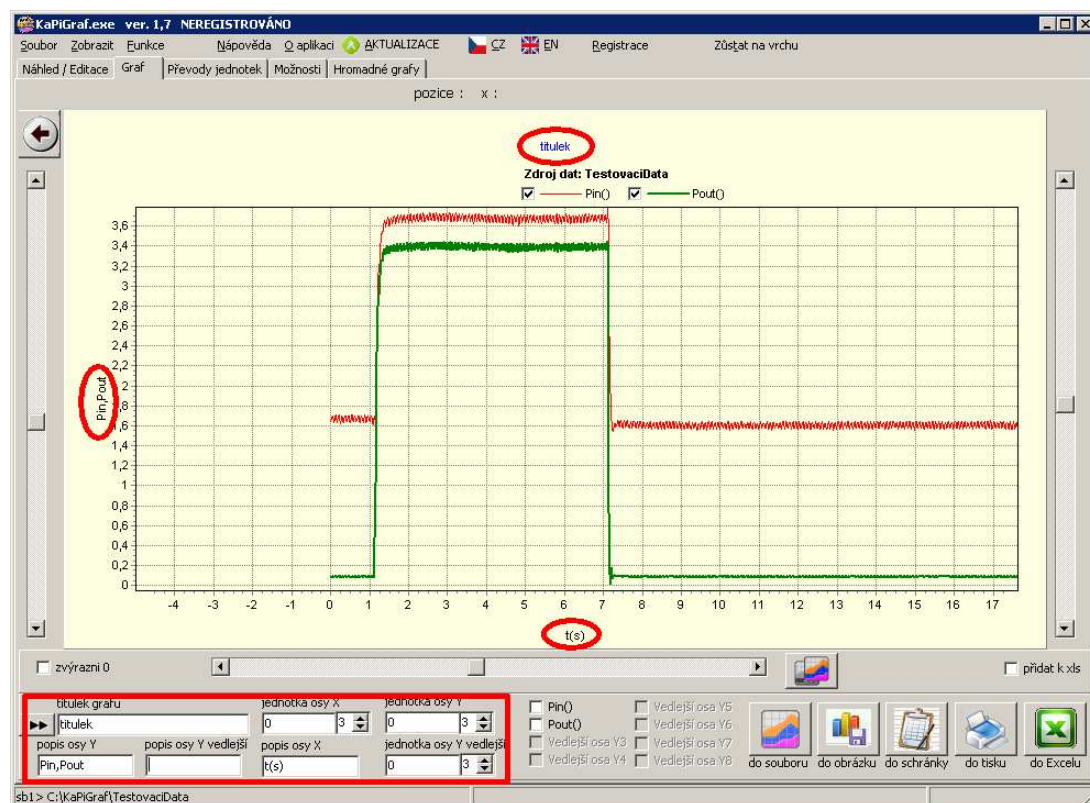
KaPiGraf – Graph – Information LED

Then hover the mouse cursor over again and click the right mouse button again (TO will be selected) , the information LED turns black and at the same time sets the selected axis to the new values.

To return to the basic axis settings, hover over the axis until the mouse cursor changes to a hand, and then click the mouse wheel.

3.4. Working with the chart – chart title, axis description, unit settings

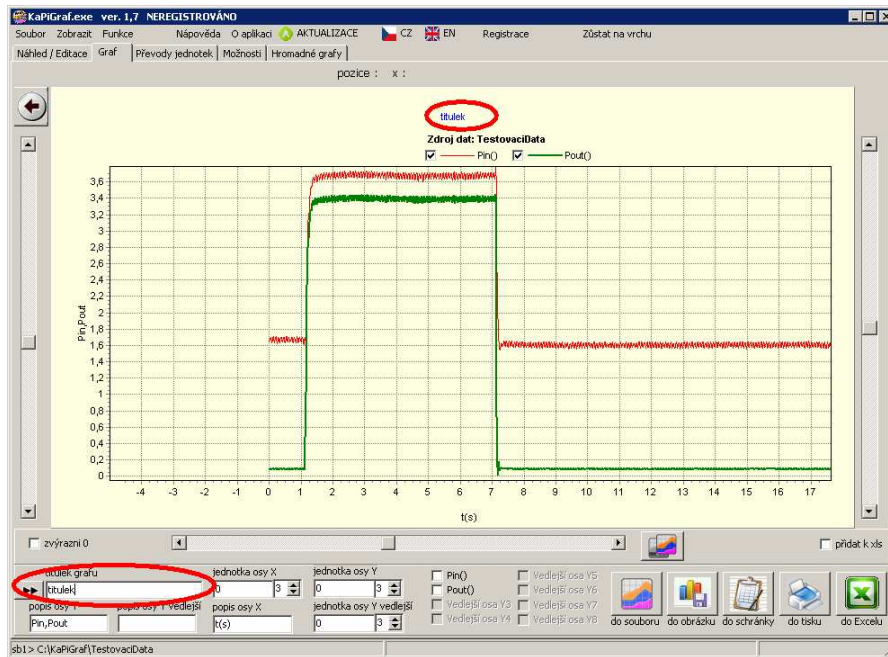
The chart title, axis description and unit settings can be set at the bottom of KaPiGraf (see picture)



KaPiGraf – Chart – setting the chart title, axis description

Chart Caption

Left-click in the Chart Caption field and type your own text. The caption in the chart will automatically change, see Image



KaPiGraf – Graph – Graph Title



For longer texts, it is convenient to click on the button and an editing window for the chart title will appear. see. Image

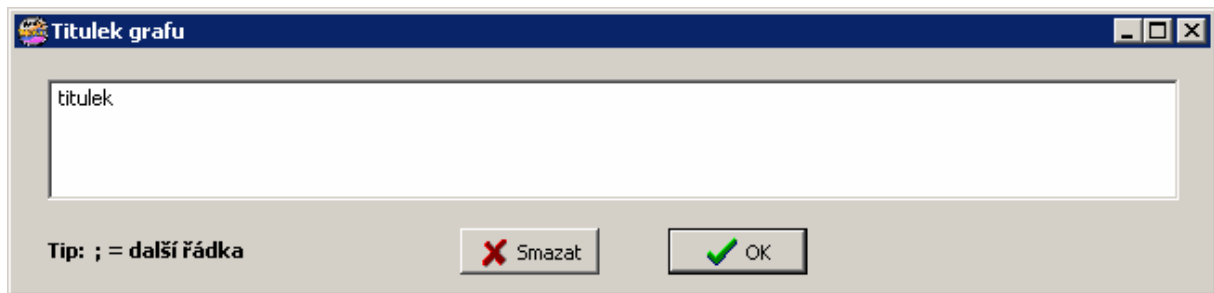


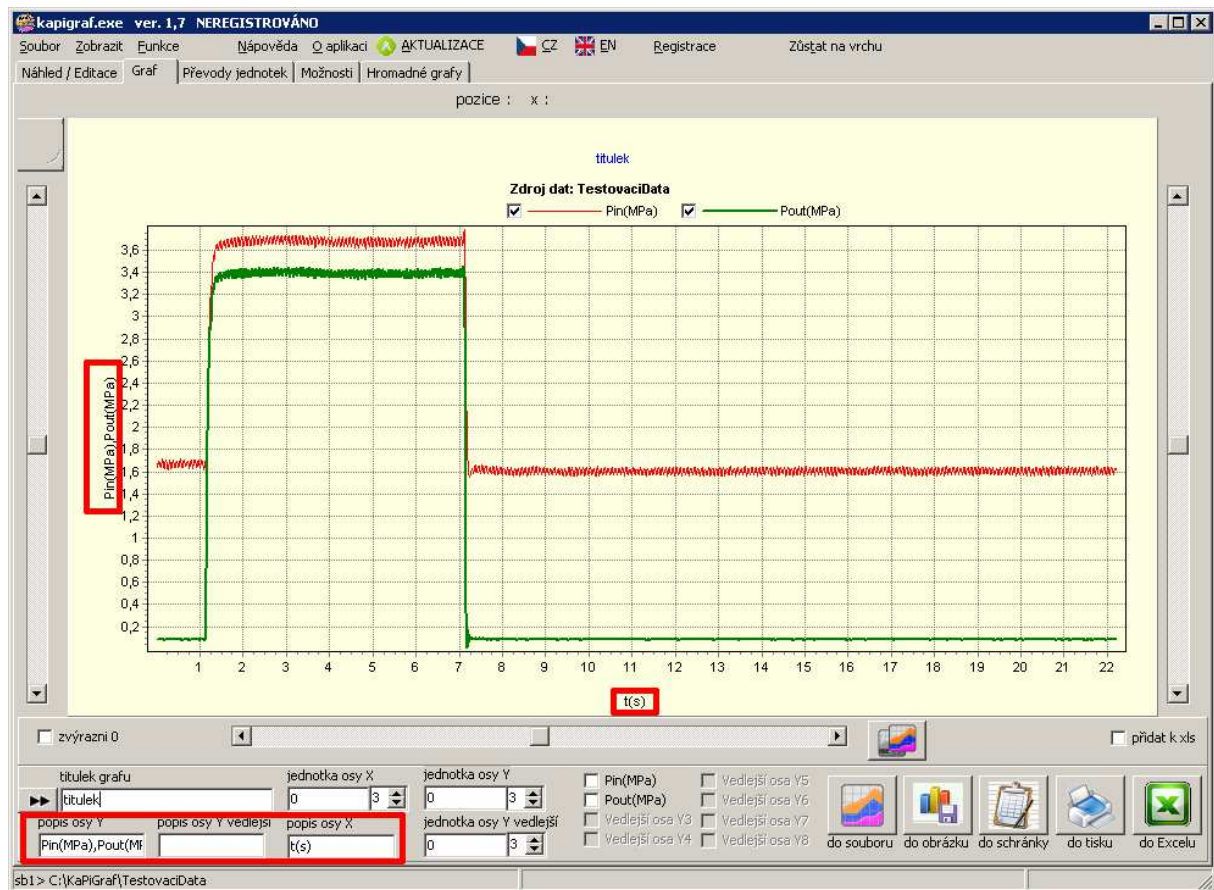
Chart Caption – Edit Window

If the title is longer, it can be divided into multiple lines by typing ; e.g. headline1; Title2

The changes take effect when you click OK.

Description of the axis

Left-click in the Y/X axis description boxes at the bottom and type your own text. The description of the axes in the chart will automatically change.

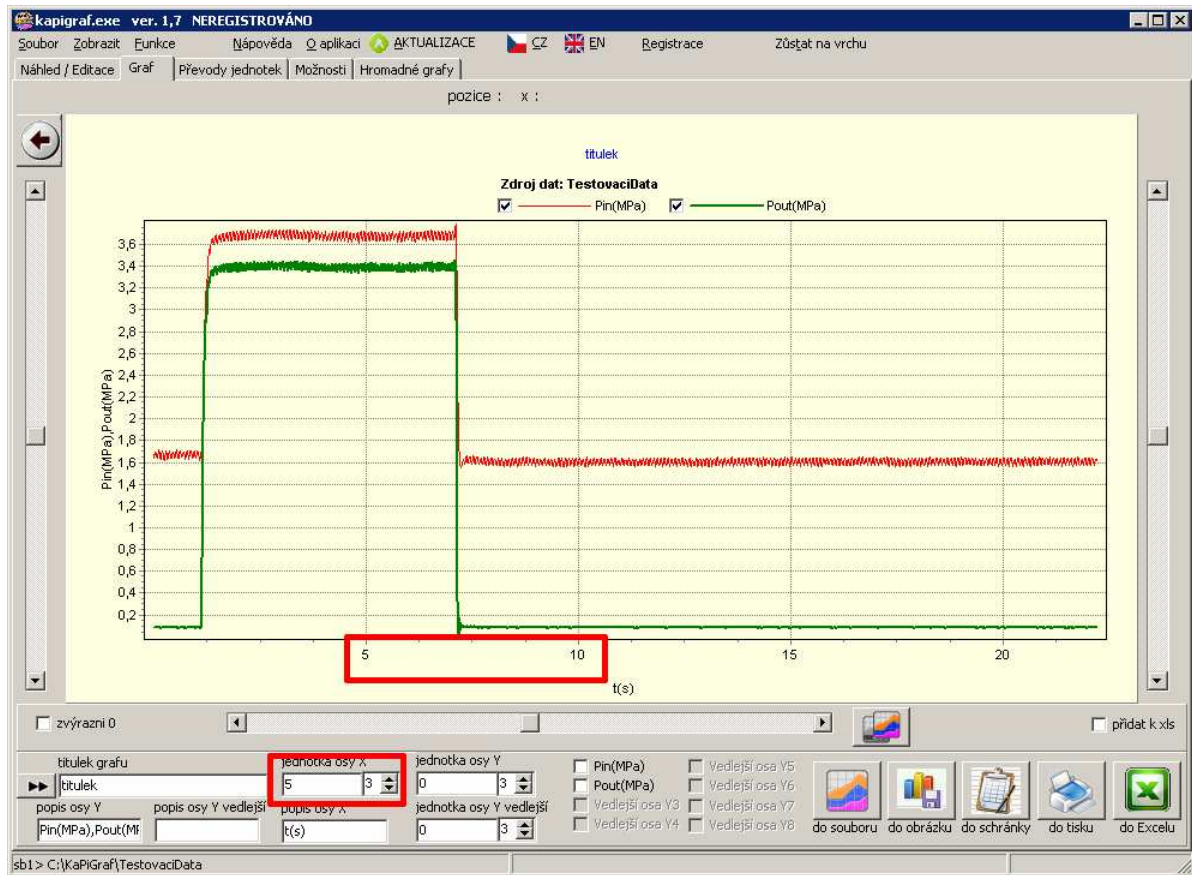


KaPiGraf – Graph – axis description

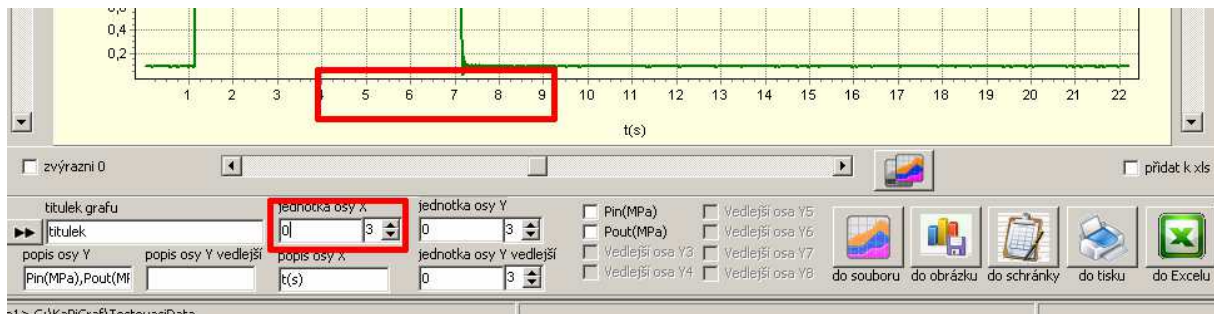
Axis Units - Main

To change the units on the X,Y axes, left-click in the appropriate box at the bottom and write your own value.

For example, for the X-axis, we set the value 5 (see the figure).



If the value is set to **0** The unit is set automatically.



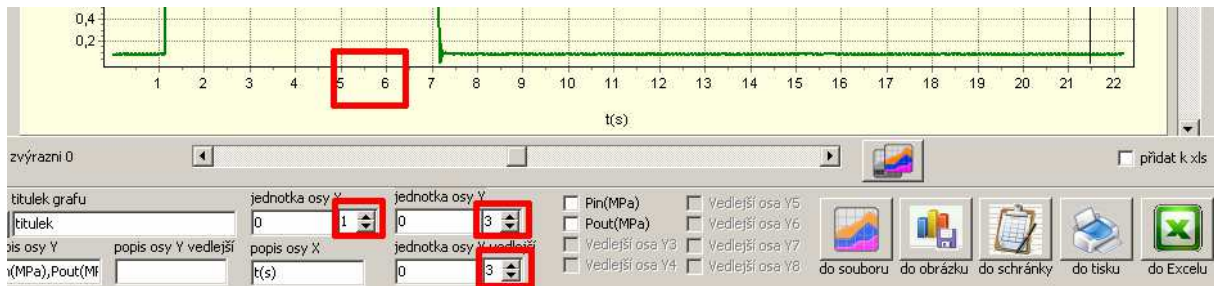
KaPiGraf – Graph – Main Unit

Axle Units - Minor

To change the X/Y axis sub-unit, click



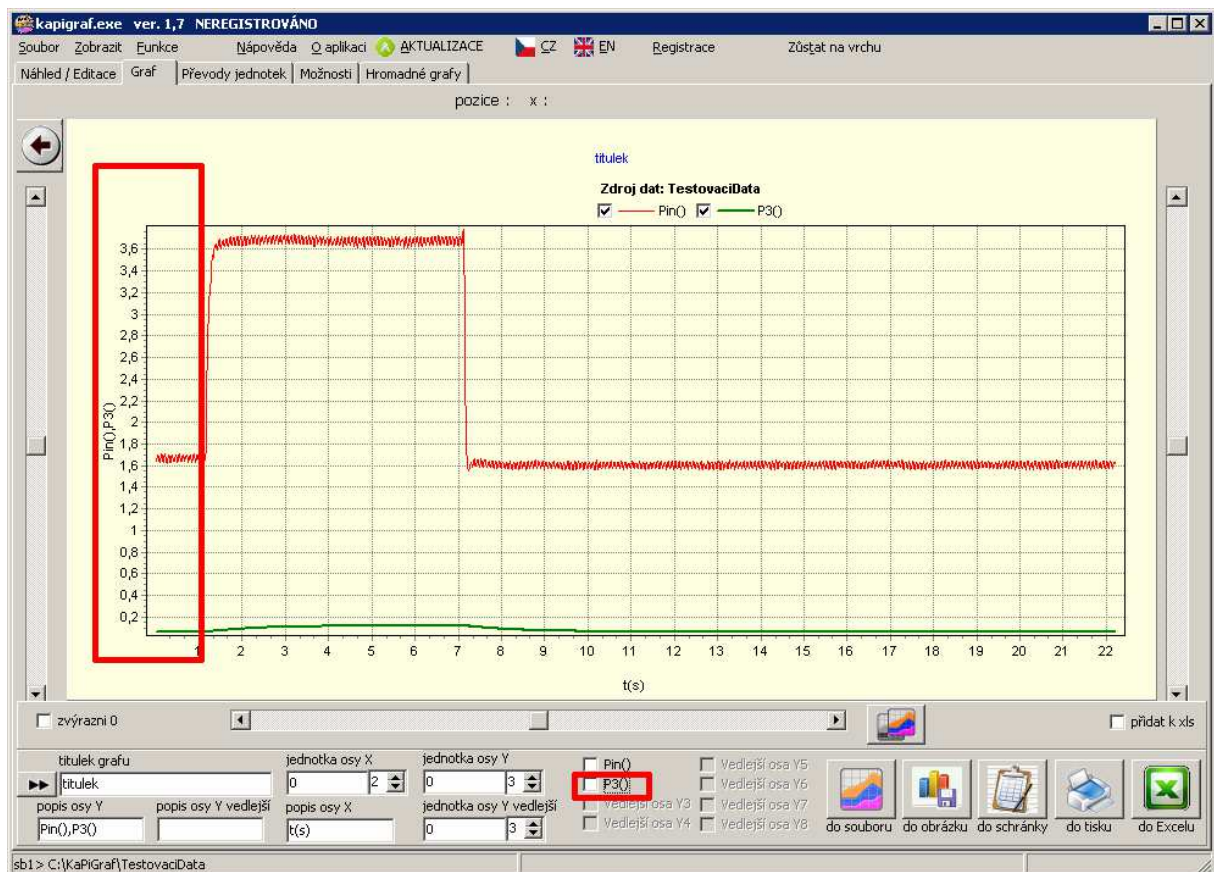
arrows next to the selected drive. see. Image.



KaPiGraf – Graph – Secondary Unit

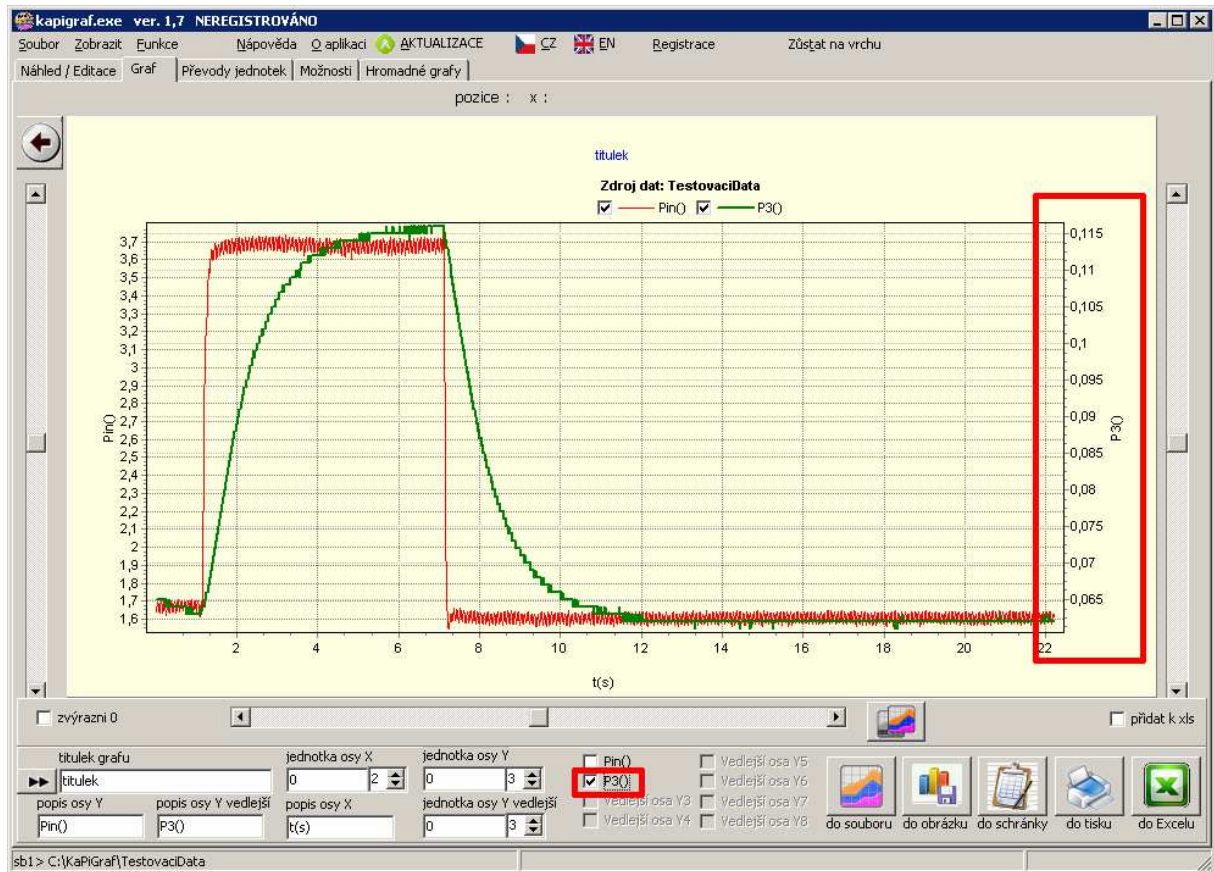
3.5. Working with the Graph – Major/Minor Axis

When the graph is displayed, the curves are always displayed on the main axis – the left axis. (see. image)



KaPiGraf – Graph – Minor Axis

To get the second curve (green) to **minor axis – right axis**, left-click mouse button on the green shrimp check box to P3 see picture. Then the green line to P3 will be displayed on the larger axis – the right axis.

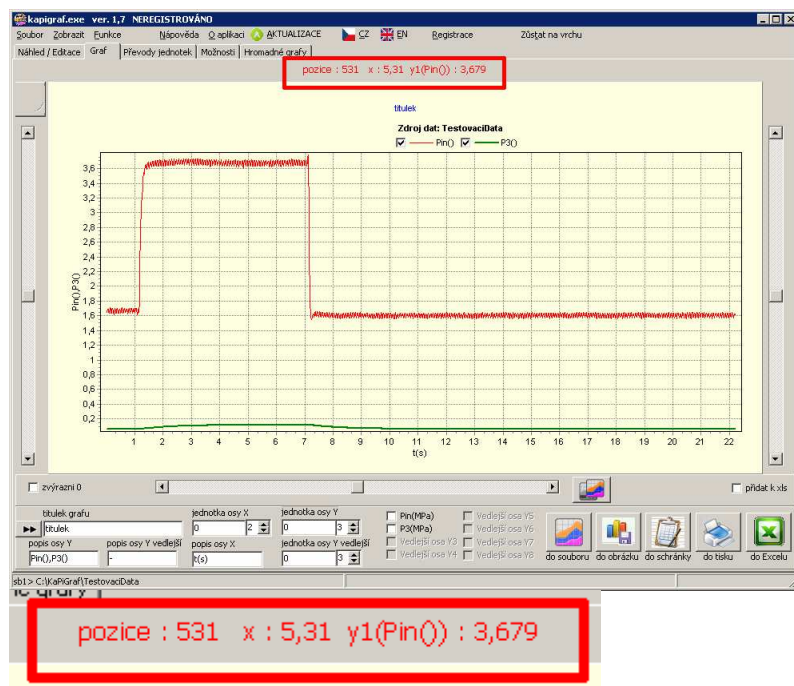


KaPiGraf – Graph – Minor Axis

If you want the green curve to be on the main axis again, click on the P3 green curve checkbox again.

3.6. Working with the graph – current value

If you hover over a curve, its current value is displayed in the fu header. The color of the text is identical to the color of the selected color. The game sees. Image.



Legend:

position – the number of the record in the data of the selected river k
 x – the value subtracted on the X axis
 y – the subtraction value on the Y axis

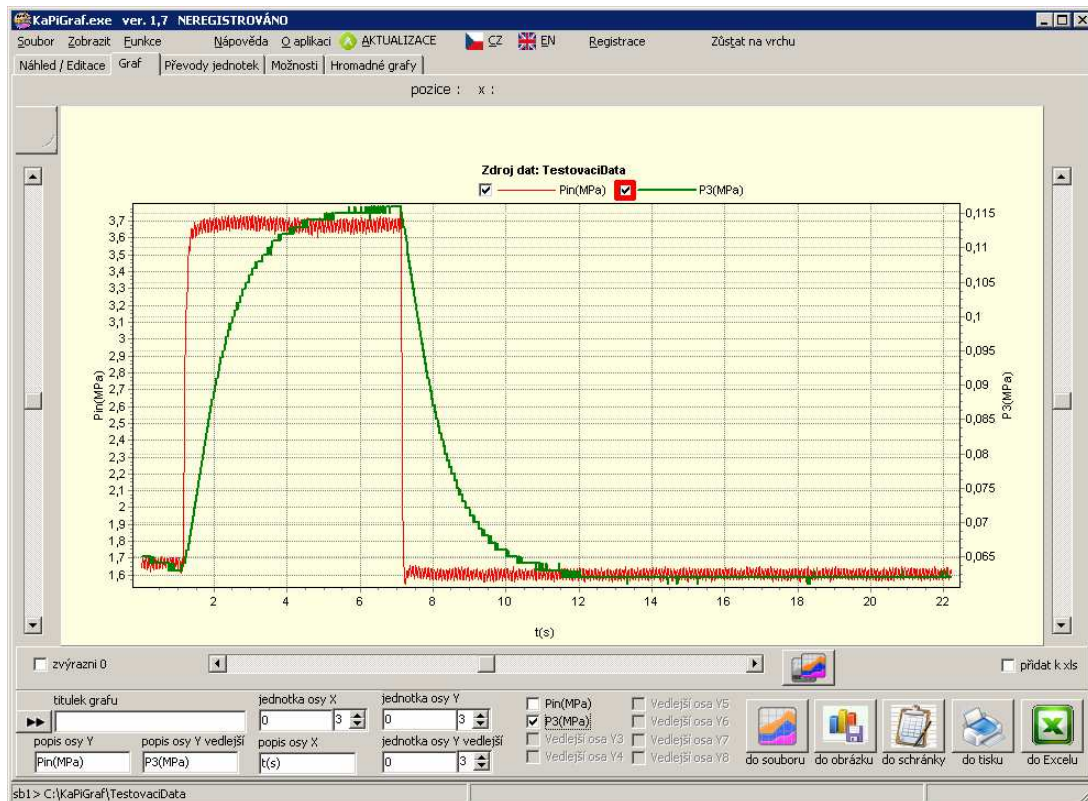
If we want to display the current value of all displayed curves, hold down the SHIFT button when hovering over any curve and the value of the second curve will also be displayed in the header .

```
pozice : 310 y1(Pin()) : 3,673 y2(P3()) : 0,107
```

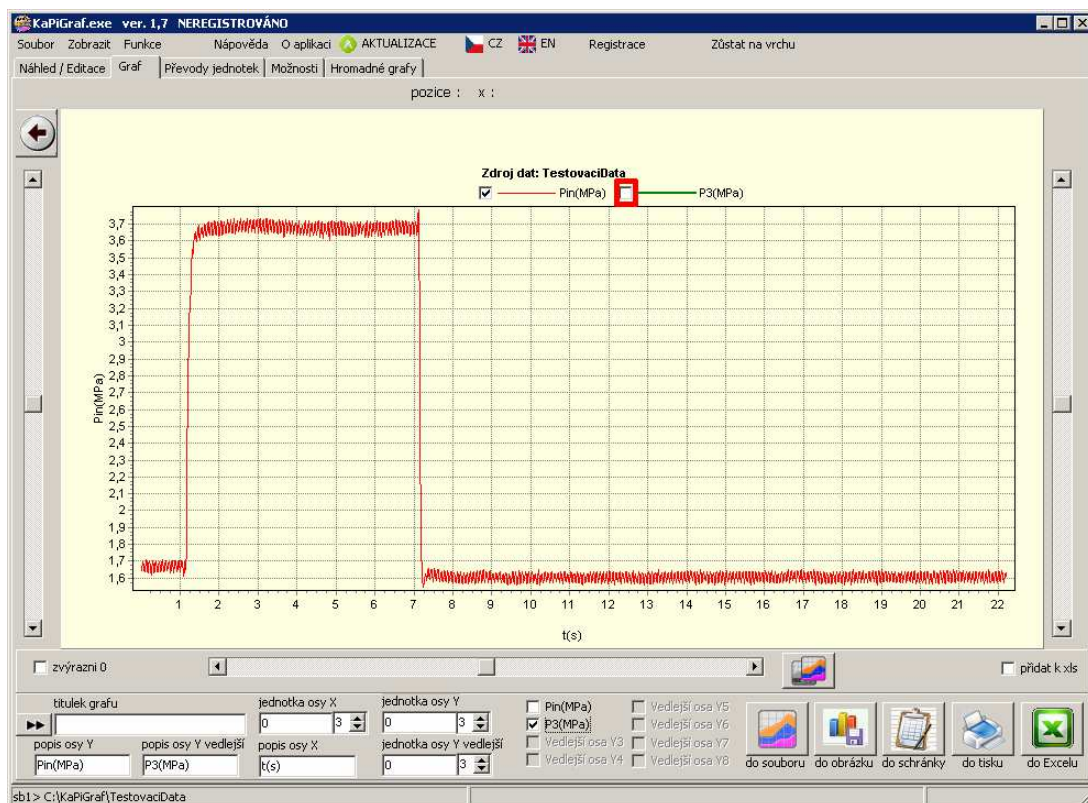
The curves are labeled Y1 to Y8 and at the same time their header is given in parentheses, e.g. y1(Pin)

3.7. Working with the graph – hiding / showing the line to

If you need to temporarily hide a curve, just click on the checkmark in the chart legend. (see picture)



KaPiGraf – Graph – green curve is displayed

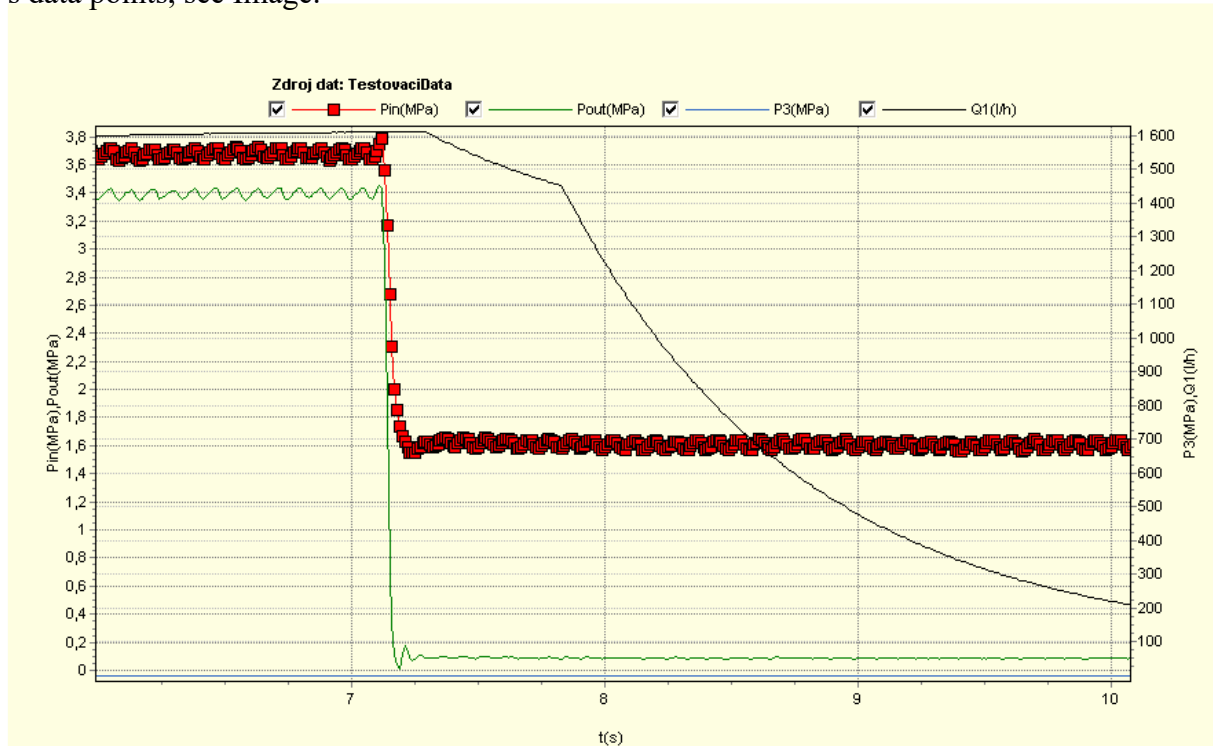


KaPiGraf – Graph – green curve is hidden

3.7.1. Working with a graph – operative display of the

3.7.1.1. Show/Hide and Size Data Points

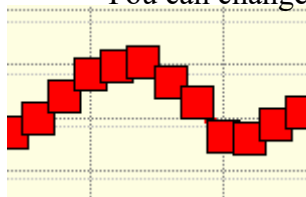
To quickly view data points, hover over the selected curve until the mouse cursor changes to a cross. Then perform CTRL+Left-click . A curve appears with data points, see Image.



KaPiGraf – Graph – Data Points

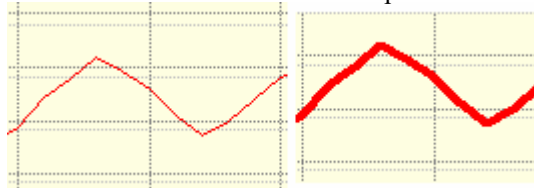
To hide the data points, again CTRL + left-click .

You can change the size of data points when they are displayed with the mouse wheel.



3.7.1.2. Curve thickness

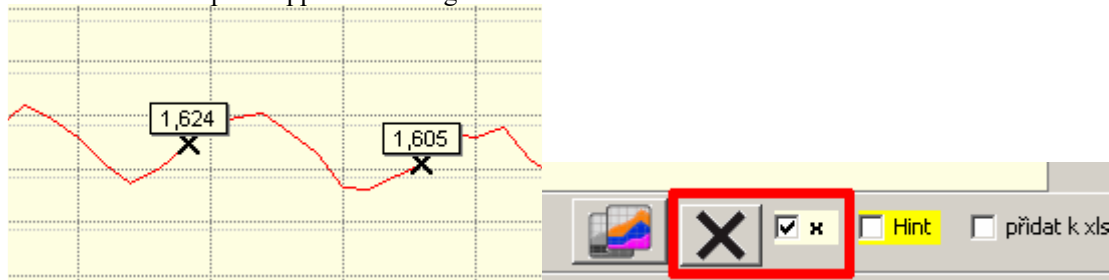
To quickly adjust the thickness of the curve (highlight), hover over the selected curve until the mouse cursor changes to a cross. Then you use the mouse wheel to adjust the thickness of the curve (highlight). When the ESC key is pressed, the thickness of the curves and the size of the data points are reset.



KaPiGraf – Graph – Curve Thickness

3.7.1.3. Data labels

Hover over the selected curve until the mouse cursor changes to a cross. Then click on the mouse wheel. A cross with a description appears. see. Fig.



View - Click to hide the label .



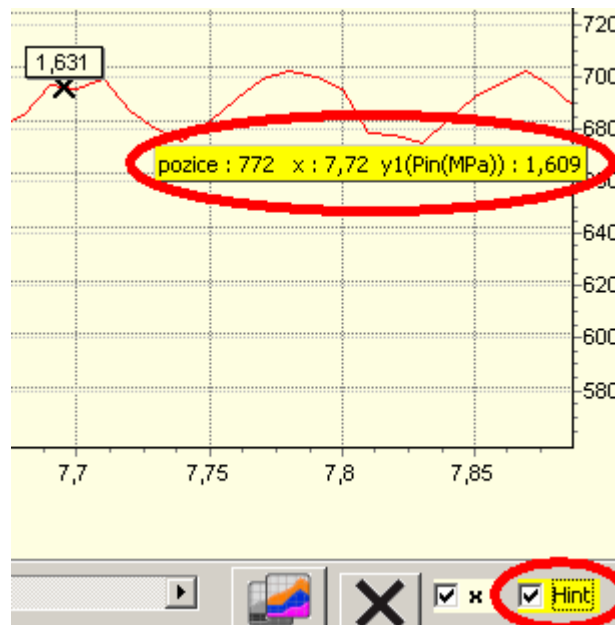
to hide the crosshairs by clicking on At the same time, the subtraction is displayed in the chart title and can be further

e edit. (see the title of the chart)

3.7.1.4. Current values in the bubble guide

If you need to display the current values of the curve at the mouse cursor.

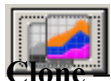
Select Hint, and then hover over the selected curve. A tooltip with the current value will appear. see. Fig.



KaPiGraf – Graph – current value at the mouse cursor

3.8. Working with the Graph – Toolbar

The toolbar at the bottom right of KaPiGraf contains the following options.



Clone – after clicking on this button, the current chart is cloned into another independent window that can be further worked with.



Save to file – after clicking this button, the selected chart will be saved to a file with the extension **.bat** to the location of your choice. This file **.bat** can then be run directly from a file manager (e.g. Total Commander or Explorer) just like an exe files. After running **.bat** file, your graph will be displayed as you left it.

In fact, the **.bat** file contains only the initial parameters for running KaPiGraf. This can be used to your advantage in your own programs, projects, when you call KaPiGraf with these parameters and your graph is immediately displayed.

E.g. the .bat

```
MODE CON CP SELECT=1250 character set settings for Czech accent support
"Z:\-KAPI=-\kapigraf.exe" "C:\KaPiGraf\TestData" "-" 1 2 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 2 0 0.010 22.200 0 3 0.061 3.786 0 3 0.000 0.000 0 3 H H H H H H "t(s)"
"Pin(MPa),P3(MPa)" "-" "-" "Pin(MPa)" "P3(MPa)" "-" "-" "-" ""
```

path to the KaPiGraf program - path to the data file - column settings for X, Y axes - scale settings on axes - main / minor settings - chart legend settings axes, etc.



To image – saves the graph as a **jpg** or **bmp** image to the location of your choice



To clipboard – saves the chart to the clipboard windows, then you can use **CTRL+V** Paste into another program



To print - displays a dialog box with the printer option - prints a chart



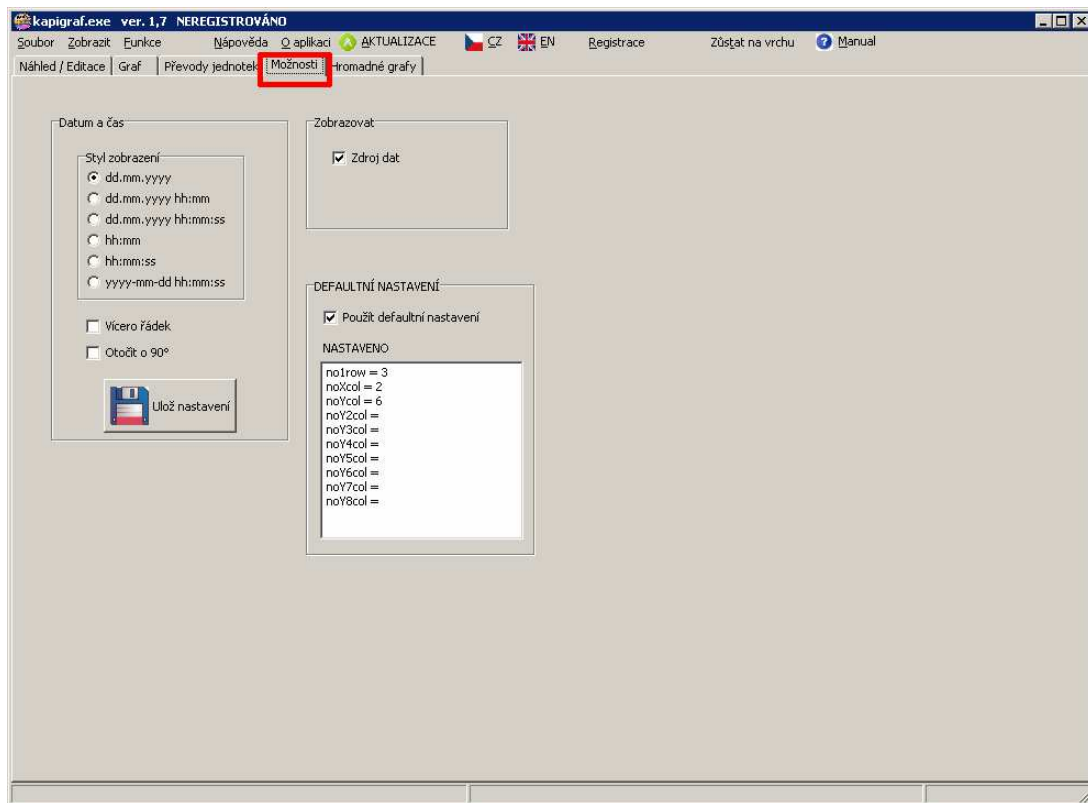
To Excel – if Microsoft Excel is installed on the computer, it will display the created chart and data (export to MS Excel)



- if this option is checked before clicking the To excel button, the exported data can be added as additional sheets to an existing Excel file

4. Options

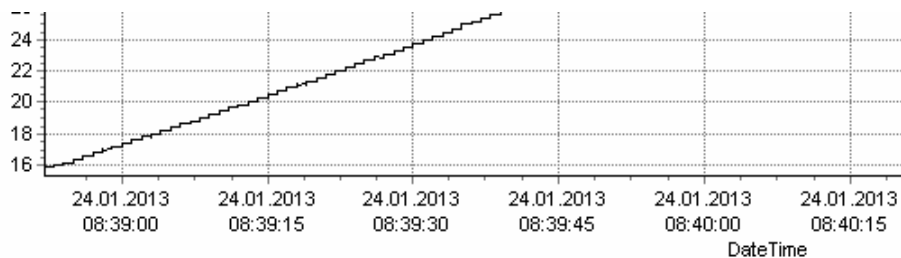
Used to set the display of certain elements in the chart.



KaPiGraf – options

4.1. Options - Date and Time

If the chart is on the X-axis , the time indication sets the display style.



Legend:

dd – day mm – month yyyy – year
 hh – hour mm – minute ss – second
 multiple line – description is on multiple rotate
 90° - rotates description 90°

Datum a čas

Styl zobrazení

dd.mm.yyyy

dd.mm.yyyy hh:mm

dd.mm.yyyy hh:mm:ss

hh:mm

hh:mm:ss

yyyy-mm-dd hh:mm:ss

Vícero řádek

Otočit o 90°

Ulož nastavení

4.2. Options – data source

Zobrazovat

Zdroj dat

kapigraf.exe ver. 1,7 NEREGISTROVÁNO

Soubor Zobrazit Funkce Nápověda O aplikaci AKTUALIZACE CZ EN Registrace Zůstat na vrchu Manual

Náhled / Editace Graf Převody jednotek Možnosti Hromadné grafy

pozice : x :

Zdroj dat: 121113STR17-45°-dp0,4MPa-24_01_13-po seřízení horního dorazu.pil100_1

Qsv()

Qsv()

DateTime

zvýrazní 0

titulek grafu jednotka osy X jednotka osy Y

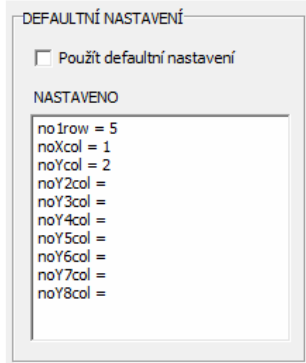
popis osy Y popis osy Y vedlejší popis osy X jednotka osy Y vedlejší

Qsv() DateTime

sb1> Z:\STW2\EPH17\121113STR17-45°-dp0,4MPa-24_01_13-po seřízení horního dor

If the Data Source option is checked, the subtitle of the chart displays the name of the source file from which the data is rendered.

4.3. Options – default settings



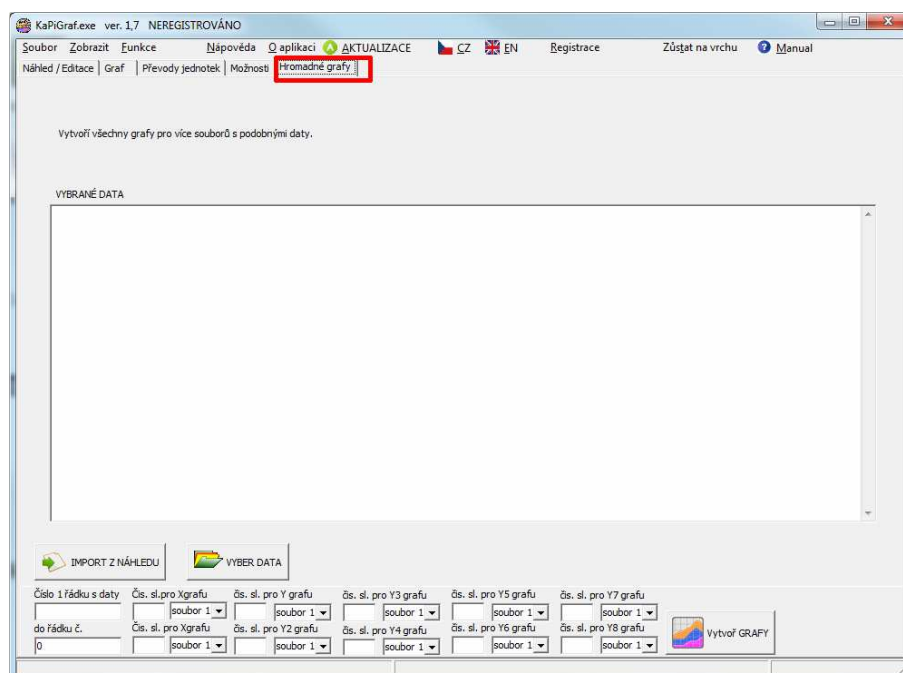
Displays the currently set values and enables/disables the DEFAULT function . If the function is enabled, when the data is loaded into KaPiGraph, the chart is automatically plotted according to the entered (default) values. For a more detailed description, see. Chapter 2.6.

5. Bulk charts

Bulk charts are used to display multiple files with similar data, where you require the same values on the X and Y axes.

(e.g. on the X axis, you always require column 1 and on the Y axis, column 5)

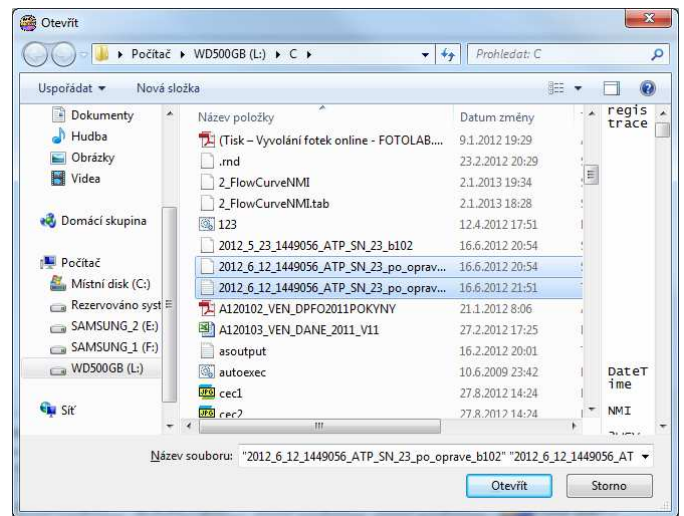
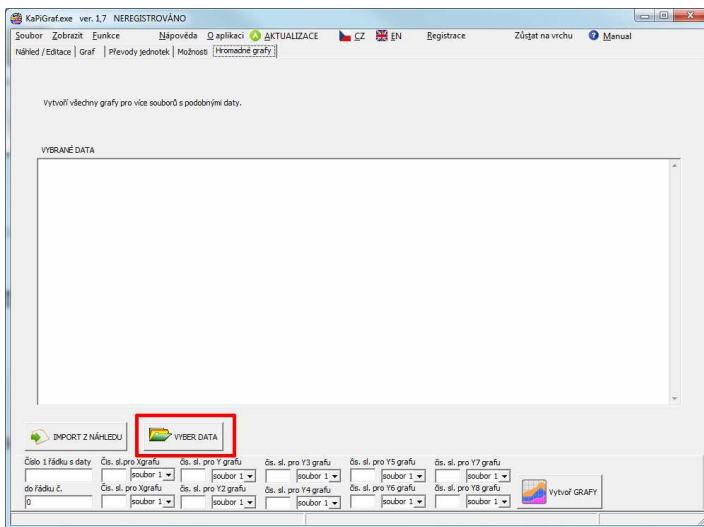
Click the Bulk Charts tab. Image



KaPiGraf – Bulk Charts

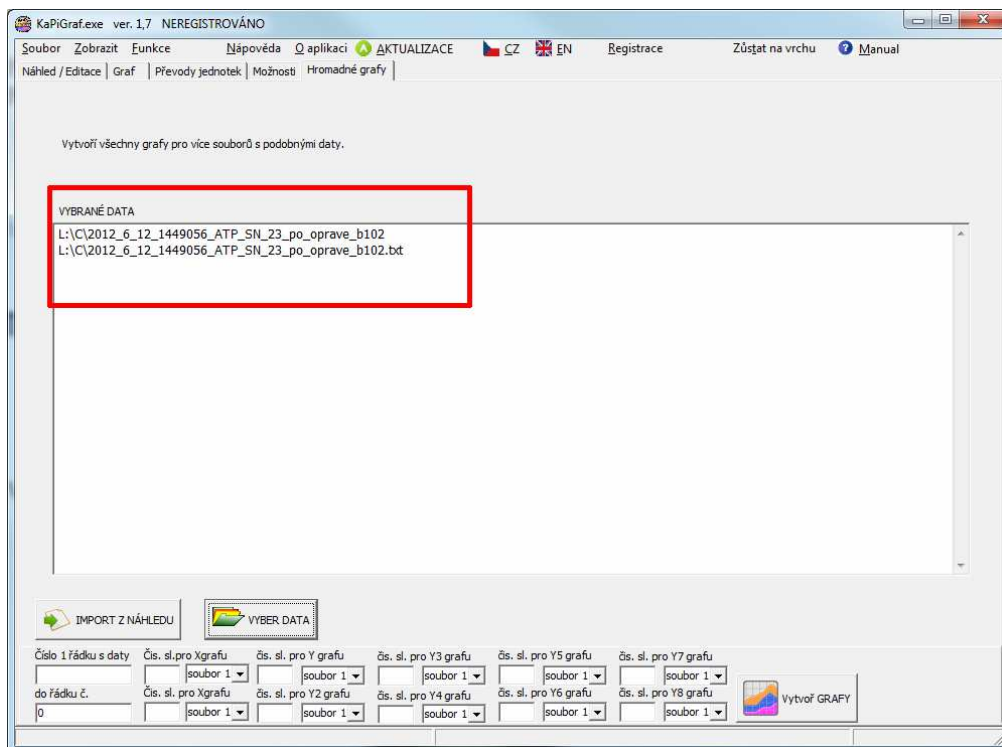
Now select your data files by clicking on the Select Data button (see the picture). The data should be

located in a single directory.



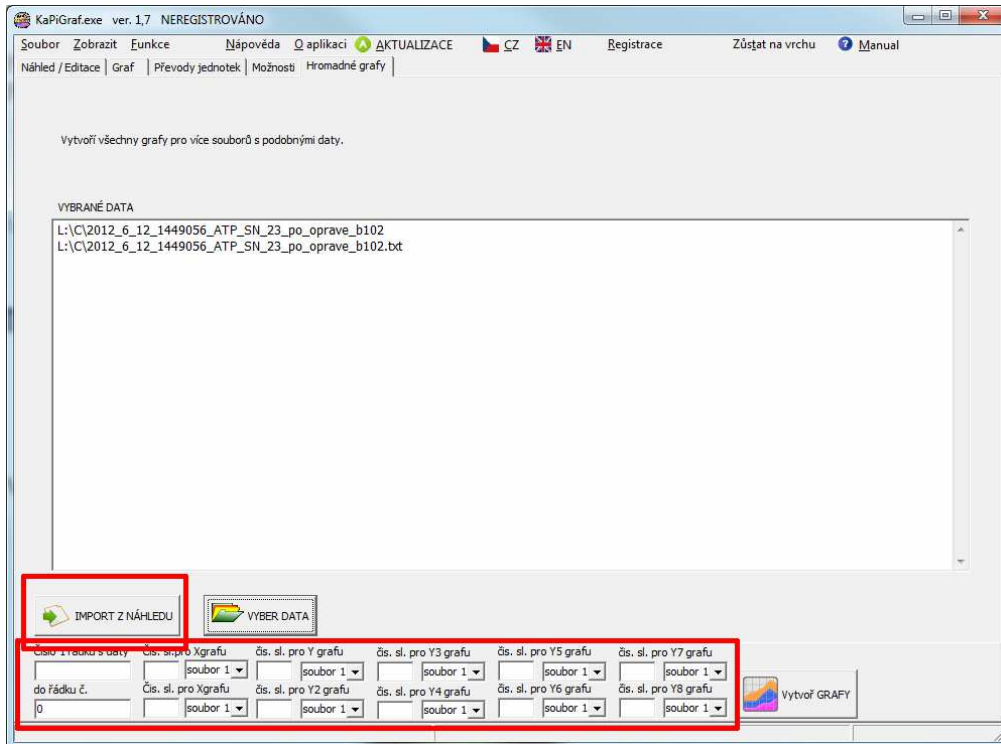
To select multiple files, use CTRL+Click or SHIFT+click on a file. Confirm with the Open button .

The selected files appear in the Selected Data window , see Fig.

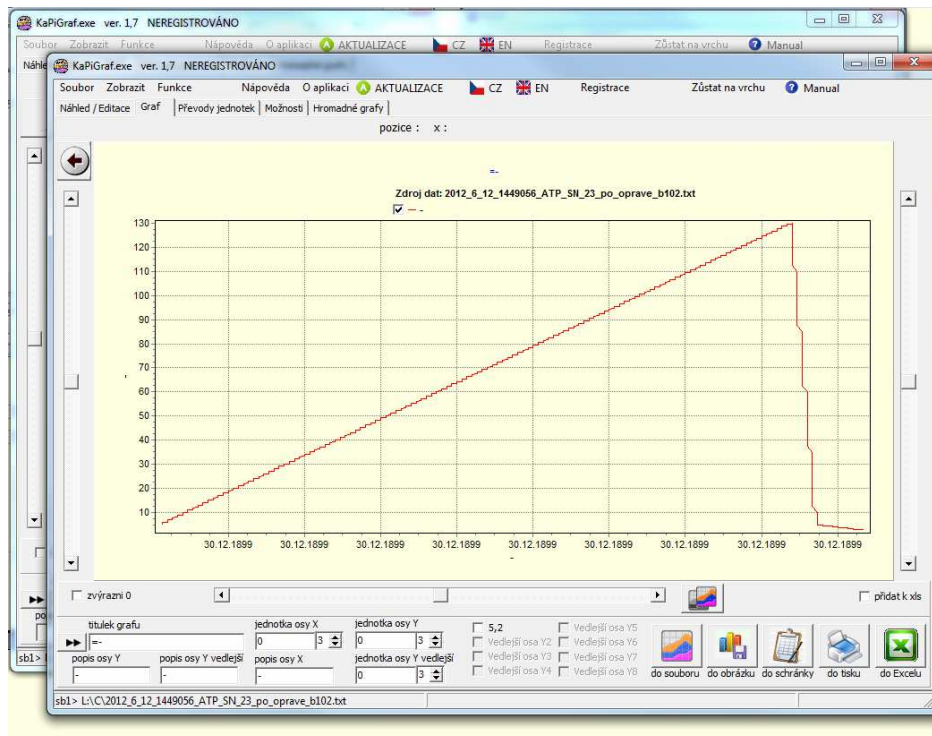


KaPiGraf – Bulk Charts – Selected Data

Now you need to set the column selection for the chart. (see picture) You can enter it manually see. Chapter 2.3 or use the Import from Preview button.



If the values are entered in the Preview/Edit tab, the Import button from the preview to copying them and displaying them in the appropriate p fields. To create bulk charts, click Create charts.



KaPiGraf – Bulk Charts

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