



# QUICK ANALYZER

## User Guide Version 6.4

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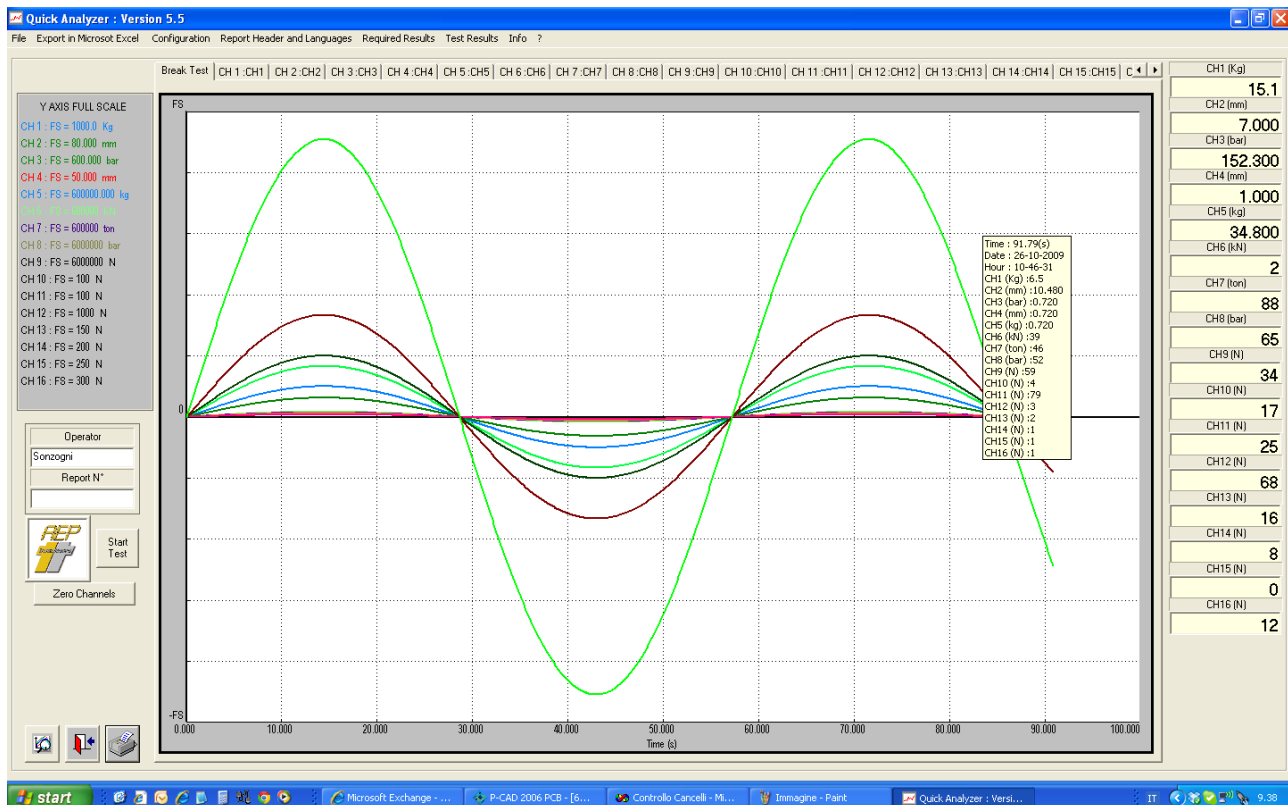
### **System requirement**

PC: Pentium III 1GHz 512 MB RAM or upper  
 Windows XP (Professional or Home) with Service Pack 3 and .NET 3.5 installed  
 Windows Vista  
 Windows 7  
 Windows 8

## 1.0 Generality

Quick Analyzer is a powerful software that allows to connect any PC in an easy and efficient way to all AEP transducers instrumentations with serial or USB channels

Through a simple configuration of channels and effective setting of the characteristics of sensors which instruments are connected, you can check the status of communication, perform tests, saving curves of the obtained graphs, calculate main results of the test and print the certificates.



It is possible to connect up to 16 instruments on the RS232 or USB line.

If the PC is not equipped with serial channels simply add USB adapters with which the programme is totally compatible.

The curves obtained can be viewed either simultaneously in a single graph respect to the time or to another channel, with different colors and set for easier recognition of same, or individually (respect to the time) for easy analysis of detail of the individual sensor

The Zoom button allows an analysis of extreme detail of a portion of a curve.

To activate this feature click on the icon. Acceptance of the function will appear as the mouse cursor becomes a cross instead of an arrow. With your mouse, click on the graph the starting point of the area of interest and, keeping the mouse pressed, drop it in the end point. The area of interest is highlighted by a dashed rectangle. After enabling the zoom function the relevant icon becomes as shown aside.

Clicking once with the mouse on the chart, you can define more and more restricted areas. To return to the original click again on the button zoom





Through an immediate menu you can access to all pages configuration program.

Tests can be stored in a proprietary database and called to be viewed and / or printed at a later time.

The program can be configured to manage the main European languages.

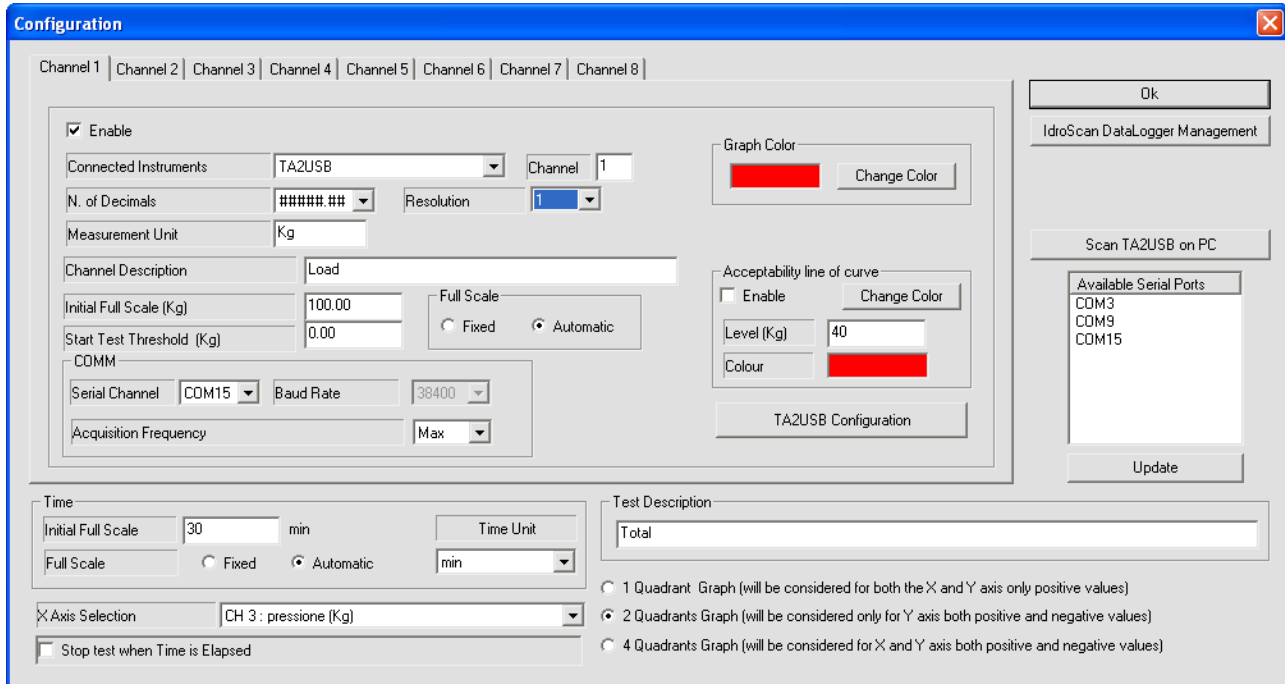
### **LICENSE AGREEMENT**

1. We grant the customer a non-exclusive and non transferable right to use Quick Analyzer software on a single computer and at only one place.
2. The licence holder is not permitted:
  - a) to pass on or otherwise make the software or associated material accessible to third parties without prior written agreement
  - b) to modify the software without prior written consent
  - c) to create works derived from software or to duplicate the written material
  - d) to translate or modify it to create works derived from the written material
- 3) the right of use is dependent on the customer observance of these general conditions of supply

Acceptance of this license agreement is formally required during the installation of the software.

## 2.0 Channels Configuration

The configuration page provides access to define the characteristics of each channel separately and independently.



Each channel can be enabled or disabled so that the operator can easily define the configuration of the test.

Some parameters relate to the characteristics of the instrument you want to connect.

- **Connected Instruments** : allows, through a drop-down menu, select the instrument you want to connect. In the case of multi-channel instrumentation (eg. MP4 or TA2USB ) will be required to specify the channel you want to connect to.
- **Serial Channel** : You can specify the serial channel which is connected to the computer. It is possible to verify in the window **Available Serial Ports** the Com ports installed in your computer. Through the button **Update** you can check the com port assigned to any removed/inserted serial channel. Check, in the event of doubt, the page of the channels available in the Windows Control Panel. In the case of TAUSB or TA2USB a dedicated button will be enabled for an automatic search of all TAUSB/TA2USB connected to the PC (see note below)
- **Baud Rate**: This parameter defines the communication data rate with the instrument. This parameter must match the one set on the instrument itself. Check inside the manual of the instrument how to check or possibly how to change the Baud Rate of the instrument

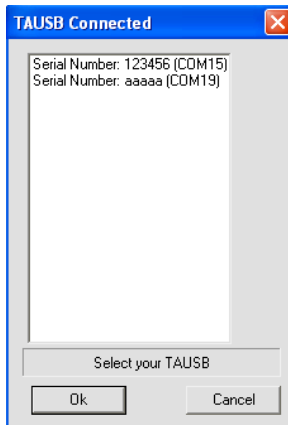
### Note

Instruments MP2000- MP2-MP4 communicate with Quick Analyzer with address 00  
TA5F communicate with address 01

**Note: Scan TAUSB / TA2USB connected to the PC**

Scan TAUSB on PC

To facilitate the selection of a TAUSB/TA2USB you can create a list of all TAUSB/TA2USB connected to the PC via the button "**Scan TAUSB on PC**" or **Scan TA2USB on PC**



A list of all TAUSB / TA2USB connected to the PC will be shown. For each of them the Serial Number and the serial virtual channel assigned by Windows to the instrument will be indicated.

Select your TAUSB / TA2USB and confirm with OK.

In the case of TAUSB/TA2USB the window on the selection of the baud rate is disabled.

The other configuration parameters instead refer to the characteristics of the sensor and setting conduct of the test.

- **Channel Description** : It is a symbolic name to be assigned to the channel for easy identification of the curve. Usually you set the variable associated with the sensor (load, pressure etc.)
- **Measurement Unit** : it defines the measurement unit of the channel. This is a free text field. No unit conversion is performed.
- **N. of Decimals** : Allows you to select how many decimal digits should be shown for the channel
- **Acquisition Frequency**: Determine the time interval between 2 acquisitions. For short-term tests is advisable left set with the default setting "Max". For particularly long tests agrees decrease the time of acquisition to avoid creating too large files. If you select "Max" the actual frequency of acquisition will depend on the characteristics of the instrument and on the set Baud Rate.
- **Full Scale : Automatic / Fixed** : Selecting the Automatic Full Scale the axis of the curve will be sized from time to time to the values actually acquired by the instrument starting from the initial value set in the "Initial Full Scale" parameter. By selecting the Fixed Full Scale the axis is defined by the parameter "Initial Scale Fund" and there will be no auto sizing of the curve.
- **Start Test Threshold** : The Start Test Threshold is, in all respects, a trigger level for the test. This threshold can be set individually for each channel. To not activate a trigger level for a channel, please leave it set to the default value of 0. The value of Start Test Threshold can , of course, be both positive and negative
- **Change Color** : Through this button you can change the color of the curve. The active color is currently shown
- **Resolution (only TAUSB and TA2USB)** : Allow to set the TAUSB / TA2USB resolution among 1-2-5-10-20-50-100

It is possible to define a line of acceptability for each channel. In this way a line will be drawn on the graph and it will be easily to define the region where the curve is above a certain value or not. The parameters relevant for this selection are :

- Enable /or disable the function
- Level : where the curve will be drawn
- Color

The end of the test (similar to Start of the test) can be manual through the STOP button or turning on the switch “Stop test when Time is elapsed” after a time define by the field “Initial Full Scale.

Some other parameters allow to define the X full scale axis (Time), the time measurement unit among seconds, minutes and hours and a comprehensive description of the test itself.

For the X axis it is possible to define the kind of Full Scale between Fixed and Automatic while a further selection allows you to define if you want to select the graph in 1 Quadrant , 2 Quadrants or 4 Quadrants. This allow to show both positive and negative values for both X and Y axis.

The screenshot shows a software interface with two main sections. The left section is titled 'Time' and contains fields for 'Initial Full Scale' (set to 30) and 'Time Unit' (set to min). Below these are radio buttons for 'Full Scale' selection: 'Fixed' and 'Automatic' (which is selected). A dropdown menu for 'X Axis Selection' is set to 'CH 3 : pressione (Kg)'. A checkbox labeled 'Stop test when Time is Elapsed' is present. The right section is titled 'Test Description' and has a text box containing the word 'Total'. Below this are three radio button options for graph selection: '1 Quadrant Graph (will be considered for both the X and Y axis only positive values)', '2 Quadrants Graph (will be considered only for Y axis both positive and negative values)', and '4 Quadrants Graph (will be considered for X and Y axis both positive and negative values)'. The second option is selected.

In the page **Report Header and Language** you can select whether to display the time as absolute date and time rather than time elapsed.

The screenshot shows a software interface for 'Report Header and Language'. It features a table for 'Time indication in the Export Data In Excel and on the Graph' with two rows. The first row is labeled '1 \*Row' and contains the text 'AEP transducers'. The second row is labeled '2 \*Row' and contains the text 'Via Bottego 33/A 41100 Cognento (Modena) Italy'. To the right of the table are two radio button options: 'Time as Elapsed Time' and 'Time as Acquisition Date and Time', with the latter being selected. Below these options are five small icons representing different national flags: Italy, United Kingdom, Germany, France, and Spain.

The X axis can be select among time and one of the other enabled channels. This allows to create charts such as the load / displacement typical of many applications.

The screenshot shows a dropdown menu titled 'X Axis Selection'. The menu is open, displaying a list of options. The first option is 'Time', which is highlighted in blue. Below it are seven other options: 'CH 1 : Load (Kg)', 'CH 2 : DEformazione (mm)', 'CH 3 : Load (N)', 'CH 4 : Deformation (mm)', 'CH 5 : X Axis (kg)', 'CH 6 : Y Axis (kN)', and 'CH 7 : Z Axis (ton)'. The dropdown menu has a scroll bar on the right side.



**Temperature Reading from JET-IDROSCAN-BIT02-LABDMM-PGE-TPUSB manometers**

These pressure gauges have the possibility of providing in addition to the pressure value also measure the temperature. To do this it is necessary to combine two separate channels: one for the pressure reading and one for the temperature reading.

**Furthermore it is necessary that the channel intended to pressure readings precedes that for the temperature reading.**

In the example described in the figures below for example has been dedicated to the channel pressure gauge JET channel 1 and channel 2 was devoted to the reading of the temperature.

Channel 1 | Channel 2 | Channel 3 | Channel 4 | Channel 5 | Channel 6 | Channel 7 | Channel 8 | Channel 9

Enable

Connected Instrument: JET Channel: Pressure

N. of Decimals: #####.###

Measurement Unit: bar

Channel Description: Pressione

Channel 1 | Channel 2 | Channel 3 | Channel 4 | Channel 5 | Channel 6 | Channel 7 | Channel 8 | Channel 9

Enable

Connected Instrument: JET Channel: Temperature

N. of Decimals: #####.#

Measurement Unit: °C

Channel Description: Temperatura

Quick Analyzer recognizes that the data of temperature and pressure coming from the same gauge that will be assigned the same COMM port to both channels

COMM

Serial Channel: COM8 Baud Rate: 9600

Acquisition Frequency: Max

## Sum Channel

It is possible to define one or more channels as the sum of other channels enabled. In the Connected Instruments window select "Canale Somma". The Serial Communication window will disappear and will appear the selection of channels to be added windows.

From the application point of view the Sum Channel will operate as the other channels. In the main window will have a dedicated analytical window and during the test will be performed its test curve.

## Caution

The Quick Analyzer calculates the sum of the selected channels. These must be enabled and properly configured.

Will not be carried out no checks on the unit or on the type of selected instruments.

The operator will check the consistency of the selected channels.



## 2.1 Data Log Management

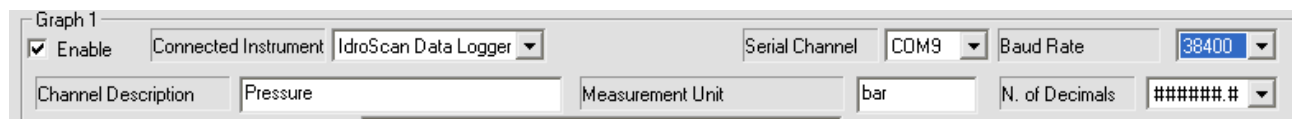
Some **AEP instruments** have a Datalogger functionality.

Quick Analyzer allows full control of the Datalogger functionality of the instrument and allows to:

- **Define the time of acquisition**
- **Define the duration of the cycle**
- **Give the Start and / or Stop the Cycle**
- **Acquire all values and save them to a file**
- **Display the curve test**

These features are extended to all the 16 Quick Analyzer channels and so you can synchronize up to 16 instruments in Datalogger functionality and then create and display a curve with all test values.

To activate this feature, you must select in the Configuration page as a Connected Instrument "Data Logger".

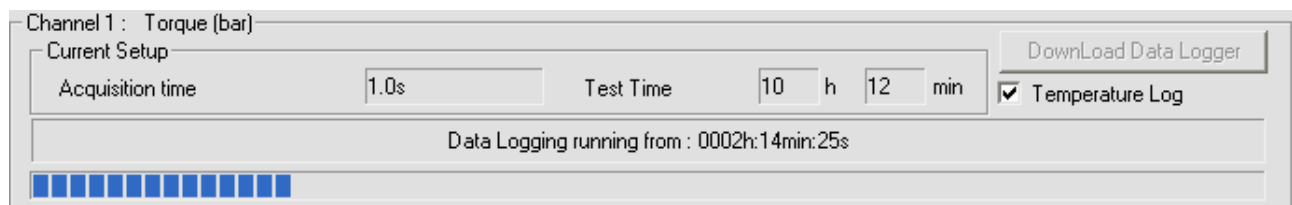


When at least one instrument "Data Logger" is selected will appear, at the bottom right of the Configuration page, the button "Set Data Logger".

It is recommended, using this feature, to select high Baud rate of the instrument to (38400 or 115200) to get the data transfer rate higher (check that the instrument is selected with the same Baud Rate)

Clicking this button you will access to the page "Management Datalogger"

For each selected channel its configuration is displayed and during the storage time you can see the time elapsed for the running cycle



At the end of the test it will be enabled the button "DownLoad Logger" and it is possible to acquire the entire curve of the test and save it in a file with the name you want using the button "Save Acquisitions."

This button is enabled when it is carried out at least a download from an instrument and it is inserted a filename in the dedicated window.

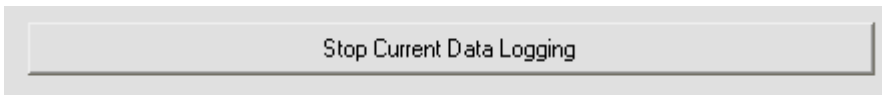


For Idroscan and JET manometers Quick Analyzer can download both the pressure and temperature values. If you download the temperature, a channel of Quick Analyzer should be dedicated to this purpose. To enable this feature, it is required that both channels has been enabled. By definition, the two channels must be consecutive (es: channel 1 and 2 or 3 and 4). The first channel will be assigned to pressure the next to the temperature.

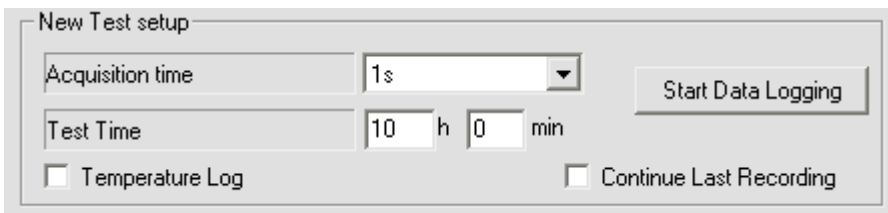
The curve created is effectively managed by Quick Analyzer as a test performed and it is therefore possible

- **Display**
- **Print a report**
- **Export to Microsoft Excel**

Through the "Stop Current Data Logging" button you can stop the cycle simultaneously on all 16 channels regardless of the settings stored in the end of the test every instrument



If there is no active Datalogging on any instrument, it is enabled the button "Start Data Logging." Based on the test settings a new test will be activated, in a synchronized way and on any instrument,



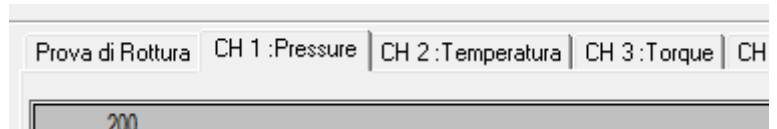
The Test Parameters are :

- **Acquisition time** : is the time between two acquisition point.
- **Test Time** : determines the test duration.
- **Temperature Log** : (only for Idroscan and JET) allow to enable the temperature during the data logging.
- **Continue Last Recording** : (only for Idroscan and STAR) allows to make partial recording (up to 5 for Idroscan and 20 for STAR) inside the Datalogger(of course in the same parameters conditions ).

In case of partial recording during the download of the datalogger will be created a single file with all the recording data and a single file for each partial recording.

## 2.2 Point to Point curve analysis of a channel

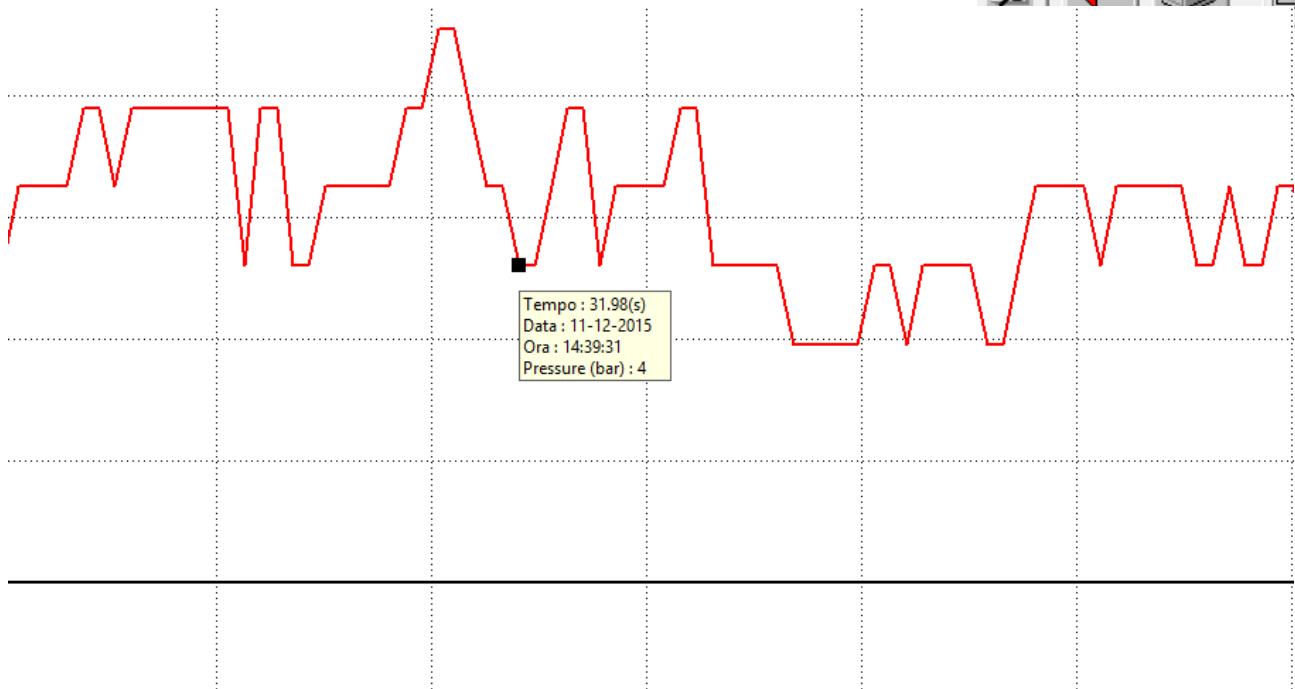
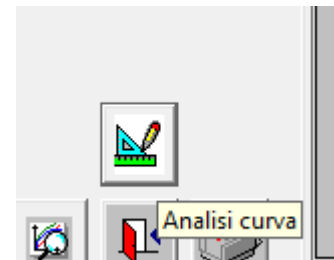
The curve of a single channel can be viewed by clicking on the tab dedicated CHx.



This page is active the point to point analysis on the curve. Click on the button **Curve Analysis**.

It will appear at a point in a curve cursor with the indication of the values acquired at that point.

You can move between all the points with the arrow keys → and ←.



You can also directly click with the mouse on the point on the curve to position the cursor quickly.

The zoom feature is not activated when you are in the function analysis point to point so if you wanted to analyze the curve to a defined portion of the test you must first select it with the zoom function and then activate the analysis point to point.

To close the analysis function point to point, click on the button



### 3.0 Test Results

It is possible to define some of the main results of the test. These can be set in the "Required Results" page.

The "Required Results" dialog box contains a list of 18 rows, each with a checkbox, a dropdown menu for "Capture Transducers values regard", a dropdown for "Time", a dropdown for "at the point", and a text input for "0.000". At the bottom, there is a checked checkbox for "Time in which", a dropdown for "Torque", and a text input for "has been > of 0.00 Nm". There are also checkboxes for "Capture Max Transducers Value" and "Capture Min Transducers Value", and an "Ok" button.

It is possible to define one or more points (up to 20) on the curve through the "Capture Transducers values regard" parameter specifying the variable and its associated value.

Quick Analyzer will calculate the values of the other variables at that point. Obviously, it will be considered the first occurrence of variable at that point

It is possible also to specify, with a variable selected, for how long this has remained far above a given value.

Finally, for each variables is possible to calculate the Max and the Min value during the test.

The "Test Results" dialog box features a large table with 17 columns: Torque (Nm), Load (N), Pressure (bar), Deformation (mm), X Axis (kg), Y Axis (kN), Z Axis (ton), Axis (bar), CH9 (N), CH10 (N), CH11 (N), CH12 (N), CH13 (N), CH14 (N), CH15 (N), and CH16 (N). Below the table, there is a text input for "Time in which Torque (Nm) has been > of 0.00 (s)". There are sections for "Max Values" and "Min Values", each with a table of 17 columns corresponding to the variables above. An "OK" button is at the bottom.

At the end of the test by selecting the "Test Results" page is possible to verify the data obtained. The results will be recalculated each time you enter in this page . So you can change the settings required to have results automatically updated.

## 4.0 Export to Microsoft Excel

It is possible to export curves test in Microsoft Excel for an analysis curves more detailed. Since the program use physically Microsoft Excel during the export job it is necessary to have the program installed on your PC to obtain this feature.

On the other hand it is possible to export data in Excel using a CSV file. This method does not require the Microsoft program to be installed on the computer

The name of the file created will be prompted before to export data.

The format in which the data is exported is represented in the figure below

	A1	fx Date : 12-02-2007			
	A	B	C	D	E
1	Date : 12-02-2007				
2	Hour : 11:56:00				
3	t(s)	Load(kg/c	Load(kN)	Torque(N)	Load(kg)
4	0.032	5001	-117.4	-16	-1
5	0.125	5001	-117.4	-16	-1
6	0.219	5001	-117.4	-16	-1
7	0.313	5001	-117.4	-16	-1
8	0.407	5001	-117.4	-16	-1
9	0.5	5001	-117.4	-16	-1
10	0.61	5001	-117.4	-16	-1

The first two columns are the Date and time of the test.

The third line is a description of the columns.

The first column always is the time in the format selected in the configuration page.

The other columns are the values captured at the measuring point.

Since it is possible that the channels can have a different number of acquisitions and at different time is taken as a time base the channel with the lowest number of points.

All export values are relative to the acquisition time for this channel.

To do a proper export to Excel, you must have set in the settings of the Windows the character '.' as decimal separator.

To do this you must go to the Windows Control Panel, select International Settings and set the character '.' as decimal separator.

1	Date : 12-02-2007				
2	Hour : 11:56:00				
3	Date : - Hour :	Load(kg/c	Load(kN)	Torque(N)	Load(kg) T
4	Date : 12-02-2007 - Hour : 11:56:00	5001	-117.4	-16	-1
5	Date : 12-02-2007 - Hour : 11:56:00	5001	-117.4	-16	-1
6	Date : 12-02-2007 - Hour : 11:56:00	5001	-117.4	-16	-1
7	Date : 12-02-2007 - Hour : 11:56:00	5001	-117.4	-16	-1
8	Date : 12-02-2007 - Hour : 11:56:00	5001	-117.4	-16	-1
9	Date : 12-02-2007 - Hour : 11:56:00	5001	-117.4	-16	-1
10	Date : 12-02-2007 - Hour : 11:56:00	5001	-117.4	-16	-1
11	Date : 12-02-2007 - Hour : 11:56:00	5001	-117.4	-16	-1
12	Date : 12-02-2007 - Hour : 11:56:00	5001	-117.4	-16	-1
13	Date : 12-02-2007 - Hour : 11:56:00	5001	-117.4	-16	-1
14	Date : 12-02-2007 - Hour : 11:56:01	5001	-117.4	-16	-1
15	Date : 12-02-2007 - Hour : 11:56:01	5001	-117.4	-16	-1
16	Date : 12-02-2007 - Hour : 11:56:01	5001	-117.4	-16	-1
17	Date : 12-02-2007 - Hour : 11:56:01	5001	-117.4	-16	-1
18	Date : 12-02-2007 - Hour : 11:56:01	5001	-117.4	-16	-1
19	Date : 12-02-2007 - Hour : 11:56:01	5001	-117.4	-16	-1

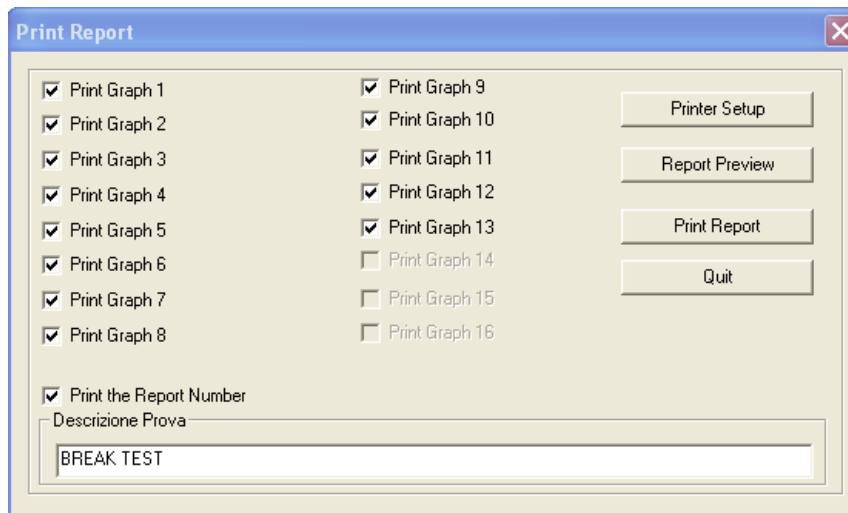
It is possible to obtain the time column with the date and time of each point of acquisition instead of the elapsed time in seconds from the start of the test.

To set this selection go to the page Report Header and Languages and select Time as Date and Time in Excel format selection for time.

## 5.0 Report

It is possible to go to the printing page of test report through a dedicated button. It is possible to configure what you want to print according to the figure below

Each curve can be printed individually or through a chart total.



It is also possible to enable / disable each curve.

The function of Report Preview lets you verify the report before being sent physically Print

The certificate may be registered according to the own company brand and / or by 3 lines of text headers.



To add a new brand just copy it in the "Loghi" folder (inside the installation folder in the program) the relative file. This must be in a bitmap format (max dimension 1500x500 point).

To select it just select it as the active brand on the page "Report Header and Languages"