

S86-303 CPTest Manual EN-V1.00

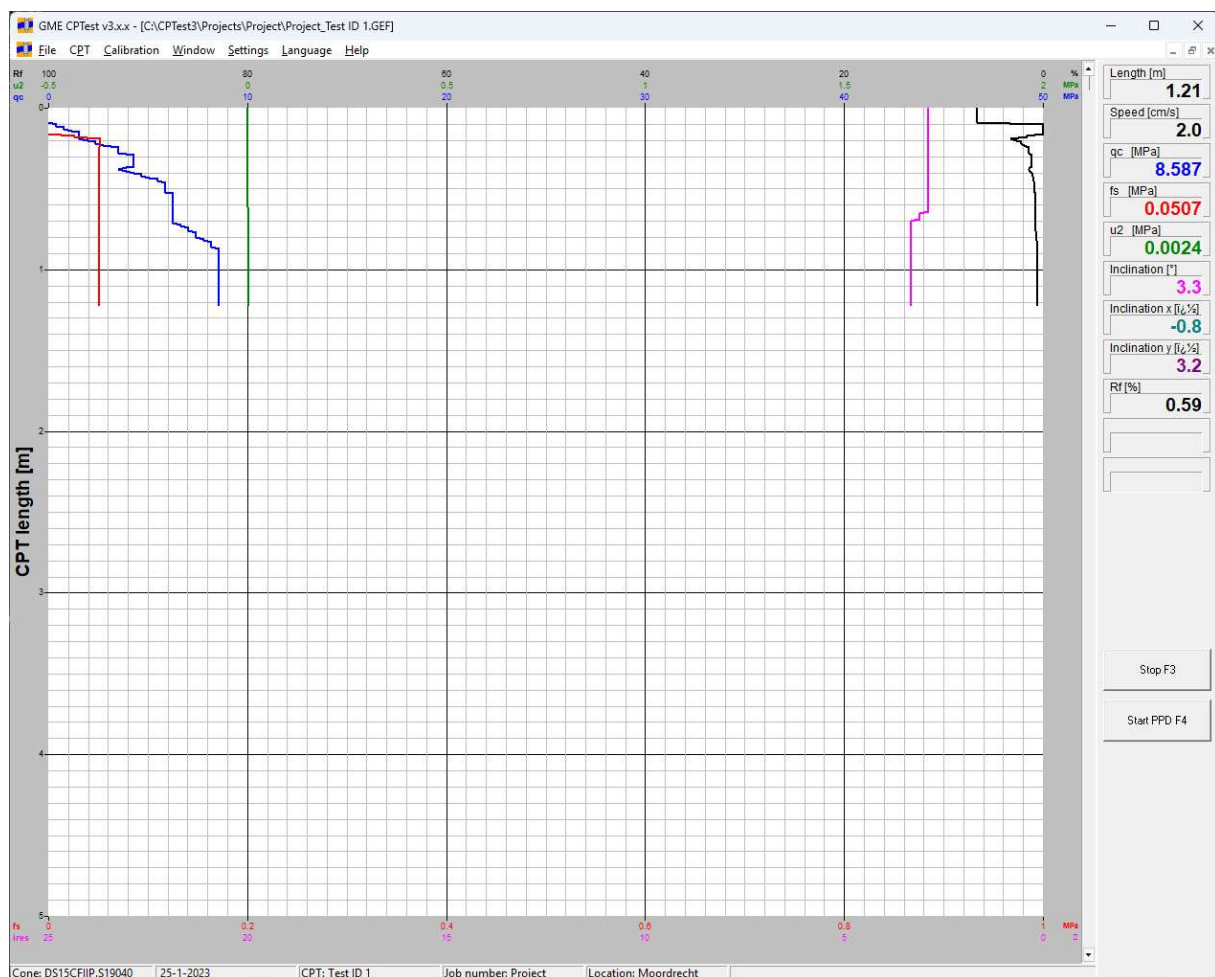


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1 GENERAL INFORMATION

| PRODUCT | |
|--------------|----------|
| Product Type | Software |
| Product Name | Manual |

| DOCUMENT | | | |
|----------------|-----------------------|----------|----------------|
| Document Title | S86-303 CPTest Manual | | |
| REVISION | | | |
| Version | EN-V1.00 | | |
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2 SYSTEM REQUIREMENTS

For CPTest to work efficiently, your system must meet at least the following requirements.

- Operating system Windows 10 or higher
- Processor 2 GHZ or faster
- Memory (RAM) 8 GB or more
- Video resolution 1024 x 768
- Interface for GME-500 RS-232 (alternatively USB to RS-232 converter)
- Interface For GME-800 Ethernet Connection (GME Connect)
- Interface for HASP key USB A

In addition, we recommend that you use the following options so that the program can run fully and smoothly.

- Mouse or trackball

3 INSTALLATION

3.1 Download software

The CPTest software can be downloaded from the Geomil website. You can find it on the download page under the 'Services' menu. On the downloads page, you can download the file CPTest v3.80 (zip) – 'CPTest 3'. After downloading, unzip the 'CPTest v_380.zip' file and follow the installation procedure described in section 3.2 "Software installation".

[Link Geomil downloads](#)

The software is also supplied on a USB stick.



3.2 Software installation

In the installation directory, you'll find the program 'SetupShell.exe'. Double-click the file to launch the installer.



3.2.1 Install Hasp driver

Together with the CPTest software a so-called HASP (Hardware Against Software Piracy) protection key will be provided. You will need this key to run the software.

Installation procedure:

1. Click on "Install Hasp Driver".
2. Follow instructions on the screen.
3. Restart the computer (recommended).
4. Insert the USB HASP key into the USB port on your PC.
5. Check if the HASP key is connected (When the LED on the USB Hasp Key lights up solid red).

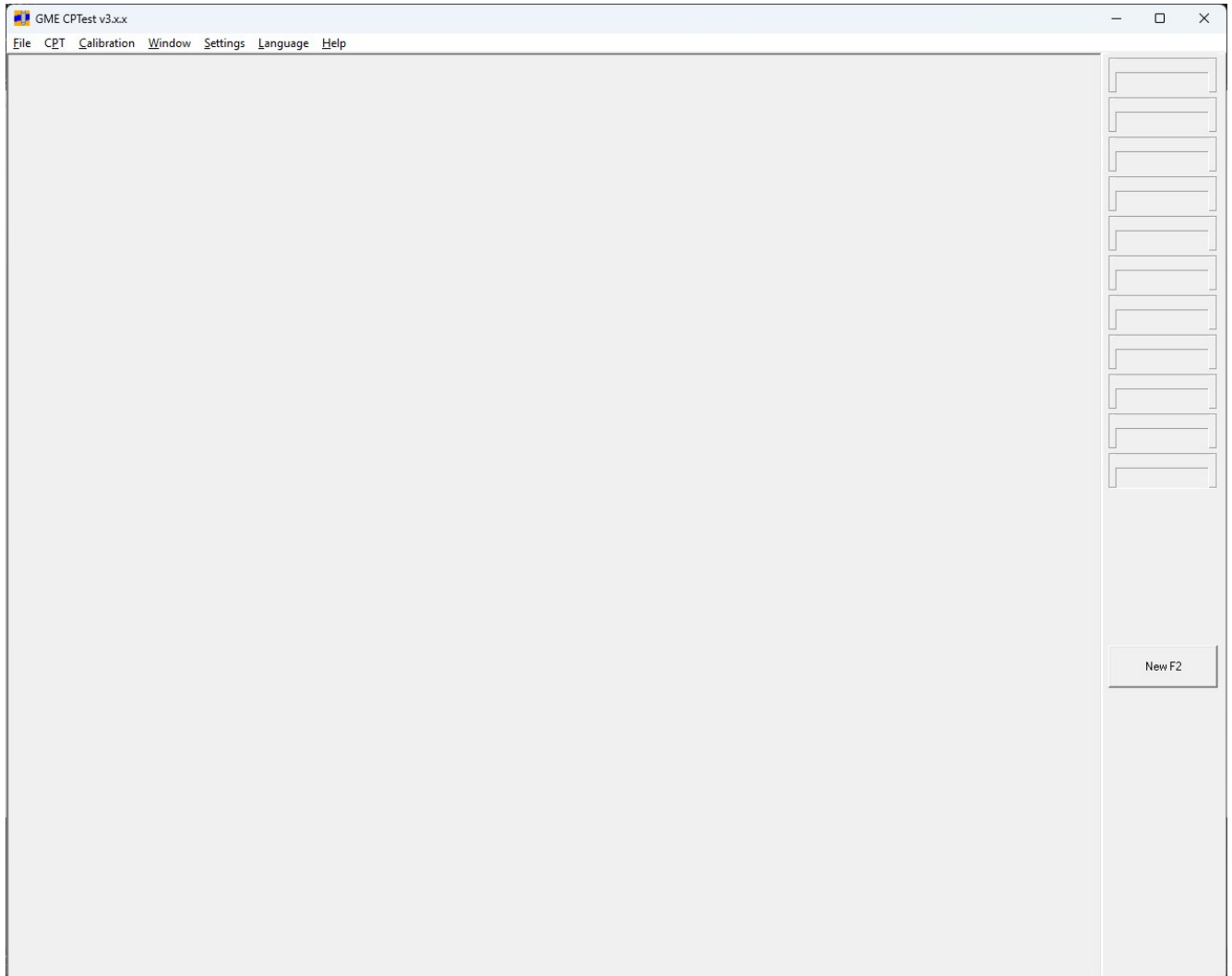
3.2.2 Install CPTest

To install the CPTest on your PC, you will need to take the following steps:

1. Click on '*Install CPTest*'.
2. Follow instructions on the screen.

4 FIRST USE OF CPTTEST

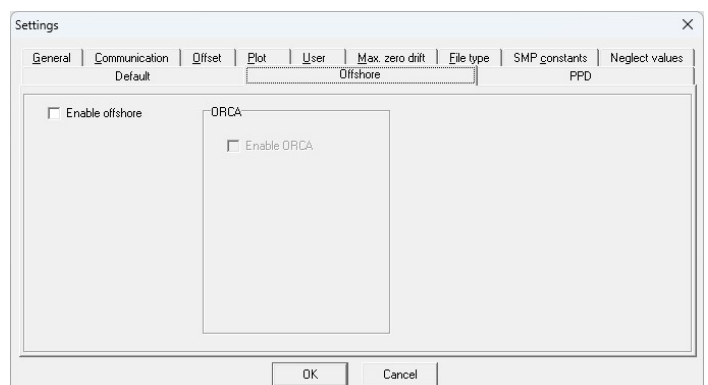
To start the program, double-click the CPTtest icon on the desktop.
You will now be in the main screen of CPTtest.



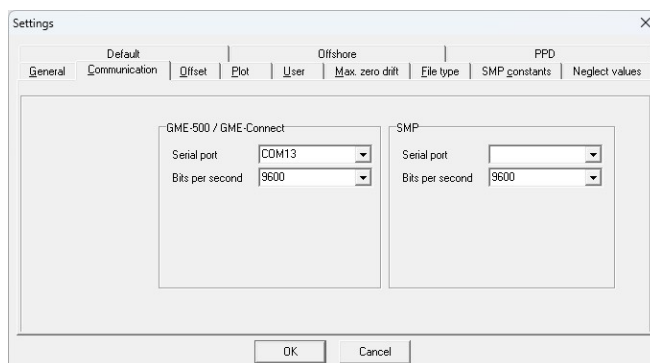
To use the program, it is necessary to configure several things in the settings screen.

The settings screen is accessible via the menu option 'Settings' -> 'Change Settings'. To make changes in the settings screen, use the password 'GeoMil' to access the settings screen.

The software can be used in onshore or offshore mode. You can configure this option in the settings screen on the 'OffShore' tab:

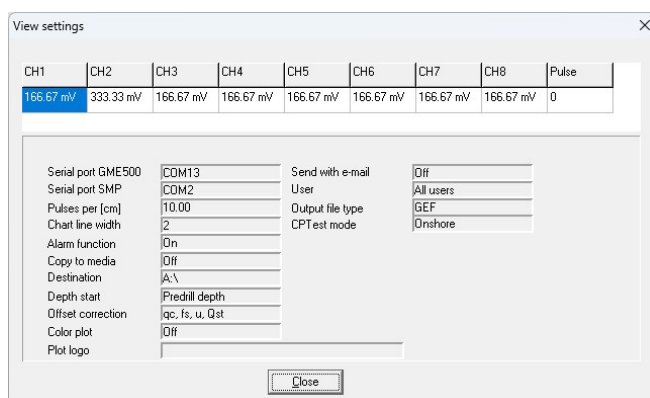


The CPTest software can be used in both analog (GME 500) and digital (GME 700) measurement systems. A serial port is used for communication. This port can be configured in the configuration screen under the 'Communication' tab:



4.1 Looking at the configuration

In the "View settings" submenu you can take a look at the current settings. If your GME-500 or GME Connect has been connected, you will see a real-time display of the digital output. As soon as you click on 'Close', you will return to the main menu.



4.2 CPTest settings

In the configuration menu the program settings can be changed. Since the settings will influence the functioning of the program, it is very important that they are configured correctly. If you have been provided with a complete installation of Geomil Equipment, or if the installation has been performed by a technician from Geomil Equipment, you can be certain that these configurations – perhaps after consultation with you – have been performed correctly.

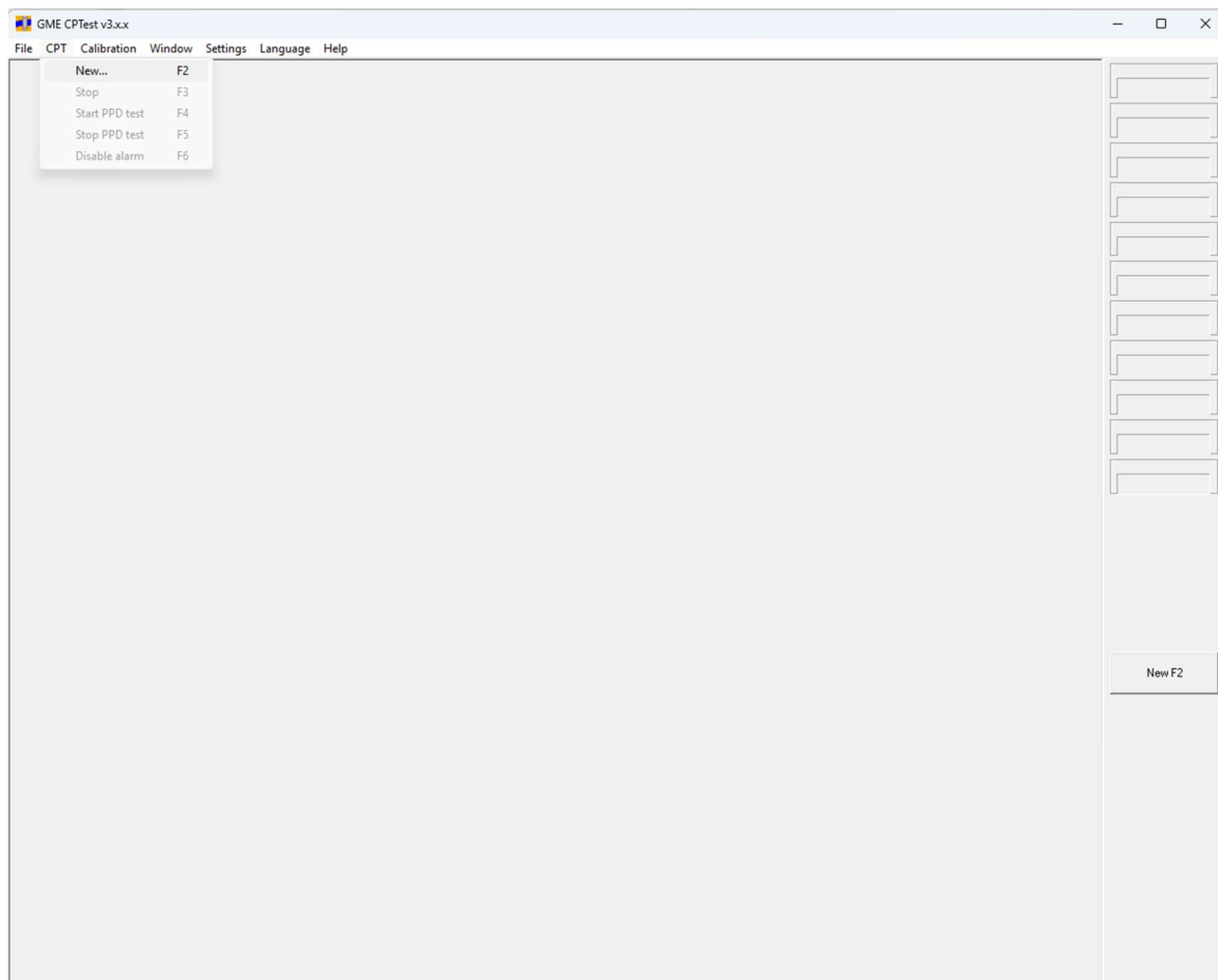
The settings screen is accessible via the menu option 'Settings' -> 'Change Settings'. To make changes in the settings screen, use the password '**GeoMil**' to access the settings screen.

4.2.1 Settings password

To change the settings, you'll be asked for a password. The default password is **GeoMil**

5 CPT ONSHORE

In the 'CPT' menu, you can start a new CPT measurement and stop it afterward. If applicable, for example, if a piezocone is used to measure pore pressure, you can also start and end a dissipation test in this menu.



Since the actions performed in this menu are most frequently used, the corresponding commands can also be invoked by using function keys.

The function key reservation is given in the different menu items. In addition, the available command key(s) are displayed as control buttons in the lower right corner and you can also use the mouse to click on directly.

5.1 Starting a CPT - The 'New' menu (F2)

After choosing this option by selecting 'CPT' -> 'New', clicking the New F2 control button or pressing the 'F2' function key, the 'CPT Information' screen will appear with the 'Basic' tab displayed by default.

In this screen you have to enter the respective project description. The program will automatically show the project information used for the last performed test, while the CPT number is automatically assigned. You can overwrite the information at any time, e.g., when you start a new project or if the automatically assigned CPT number is not in accordance with your demands.

Before you actually start the CPT, it is important that you choose the correct measuring device from a list of available units. For this purpose you click on the button on the right side of the text 'Cone', upon which a selection screen will appear. Choose the desired file name, and the correct calibration data will be used for the new CPT.

After entering all relevant information click on 'OK' or press the Enter key.

A window will appear where the zero values of the cone or measuring head are shown.

5.2 Display of zero values & calibration

A window will appear where the zero values of the cone or measuring head are shown.

The zero values of all selected measuring channels that were chosen in 'View & Logging' under the option 'View signal' are displayed.

This will give you the opportunity to compare the currently detected zero values with the calibrated zero values. If the zero values are correct, you click on 'OK' or on the Enter key.

Now the program will proceed to record an actual calibration of the cone or measuring head. This means that outputs of the cone/measuring head will be synchronised to a load of zero. It is therefore very important that the cone/measuring head is not loaded during calibration.

| Channel | Current Value | Calibrated Value |
|---------|---------------|------------------|
| qc | 166.67 mV | 1.952 MPa |
| fs | 333.33 mV | 0.2597 MPa |
| u2 | 166.67 mV | 0.0593 MPa |
| Inc. x | 2823.30 mV | -0.4 |
| Inc. y | 2760.00 mV | 0.1 |

Press OK to start calibration.



ATTENTION

Confirm

Make sure the cone / measuring head is fully unloaded before calibrating

During the calibration process, you will see the 'Calibration progress' screen. The calibration process is complete when the bar turns completely blue.

Calibration progress

Progress bar: 15 blue segments out of 20.

If the current zero values deviate too much from the zero values in the calibration data, the program will issue an error message. An example of this is shown alongside. The permitted deviation can be set in the settings screen under the 'Max Zero Deviation' tab.

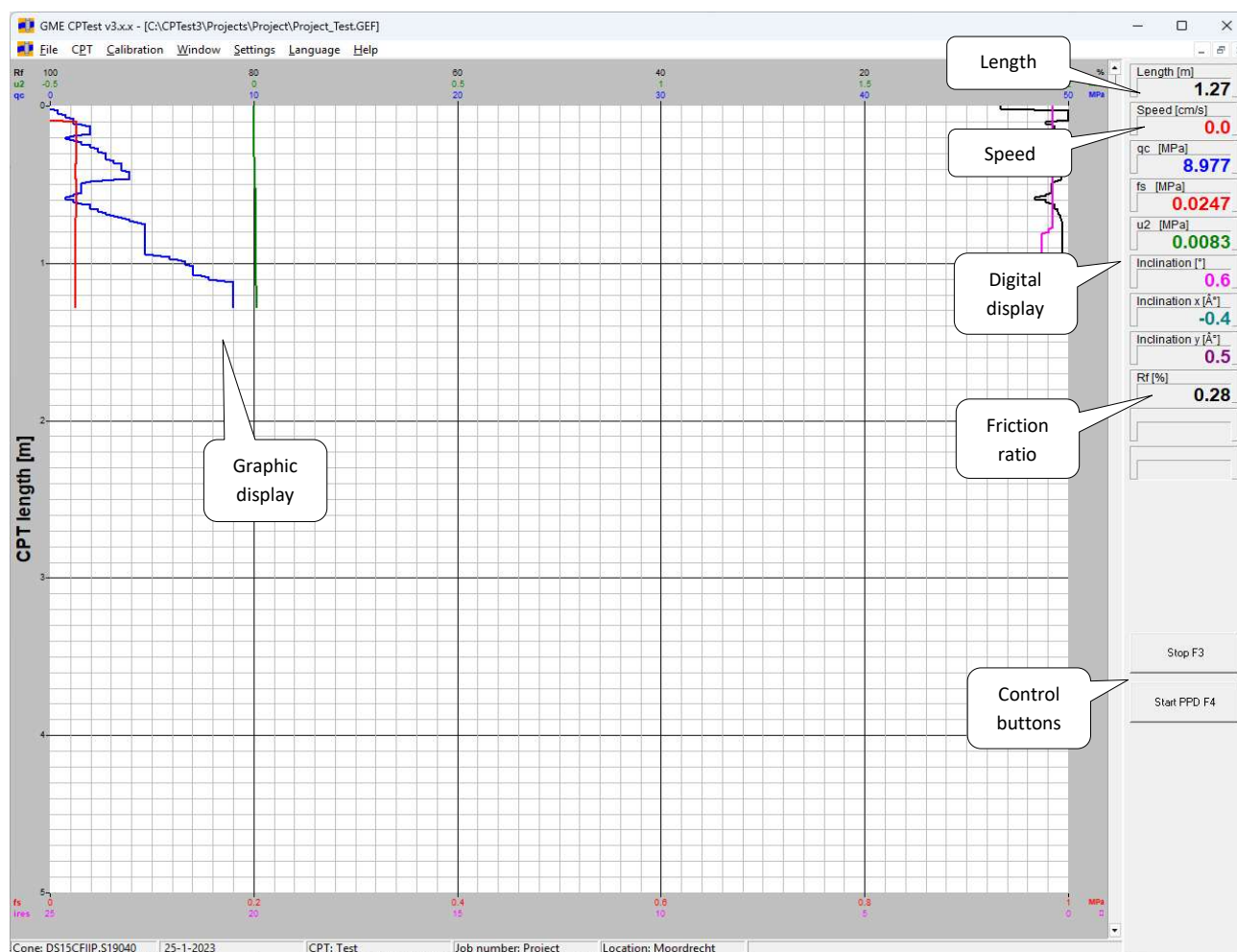
Warning

Zero drift too high for qc (E): 12,61 %
Zero drift too high for fs: 14,54 %
Press <OK> to stop the test or <Cancel> to proceed.

If the calibration process goes smoothly, the program automatically starts the CPT measurement screen.

5.3 CPT measurement

Below you see an example of a CPT measurement with fictitious values.



- **Length** Display of the actual CPT length (i.e., not corrected for the inclination)
- **Speed** The vertical axis of the graphic display concurs with this value
- **Digital display** Display of the penetration rate of the sounding process
- **Friction ratio *** Digital display of all signals chosen under the panel 'View & Logging'
- **Graphic display** Display of the friction ratio on the basis of the raw data (i.e., not corrected for the distance off-set between cone tip and sleeve)
- **Graphic display** A graphic display of all signals chosen under the panel "View & Logging", as well as the friction ratio *
- **Control buttons** The colour of the different graphs is the same as in the digital display
- **Control buttons** Display of available commands that can be started directly by clicking on these buttons

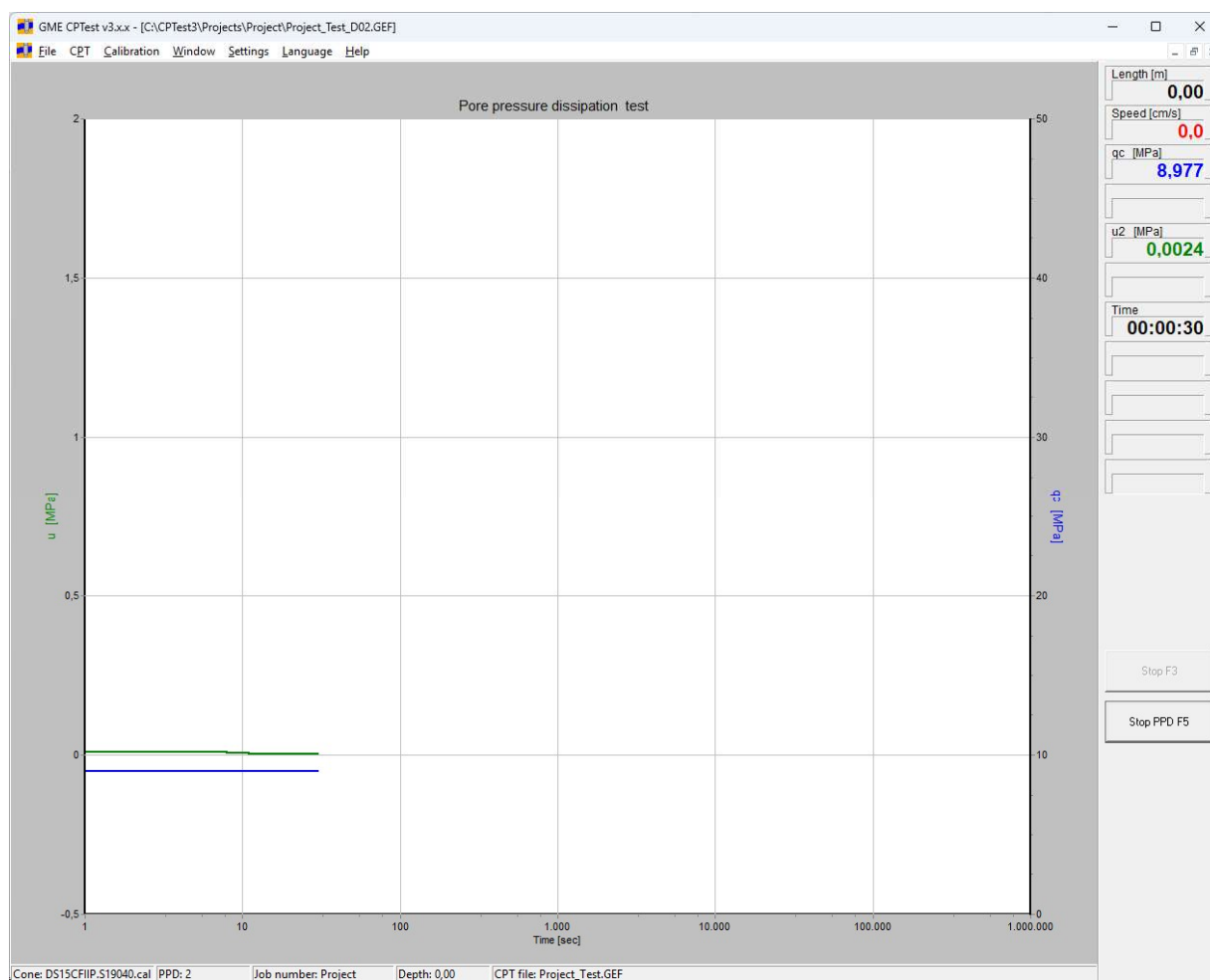
5.4 Performing a dissipation test - The 'Start PPD test' menu (F4)

If you are using a piezocone for pore pressure measuring, a dissipation test can be started during the CPT. For that purpose click on button 'Start PPD', press (F4) or choose from the main menu 'CPTest' -> 'Start PPD test'.



ATTENTION

Since a PPD test should be started instantaneously the moment the piezocone has been stopped from pushing, we recommend to press (F4) the same moment.



5.5 Terminating the dissipation test – The ‘Stop PPD test’ menu (F5)

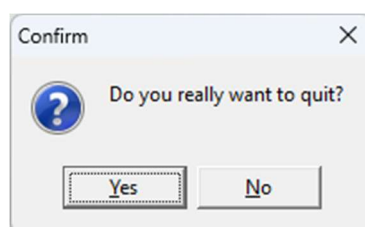
In order to terminate the dissipation test and to continue the CPT, click control button ‘*Stop PPD*’, press function key (F5), or choose the menu ‘*CPTest*’ -> ‘*Stop PPD test*’.

The program will then automatically close the dissipation screen and returns to the CPT measurement screen, so that you can continue the CPT.

5.6 Terminating the CPT - The ‘Stop’ menu (F3)

If you wish to terminate the CPT, click the control button ‘*Stop*’, press function key (F3) or choose the menu ‘*CPT*’ -> ‘*Stop*’.

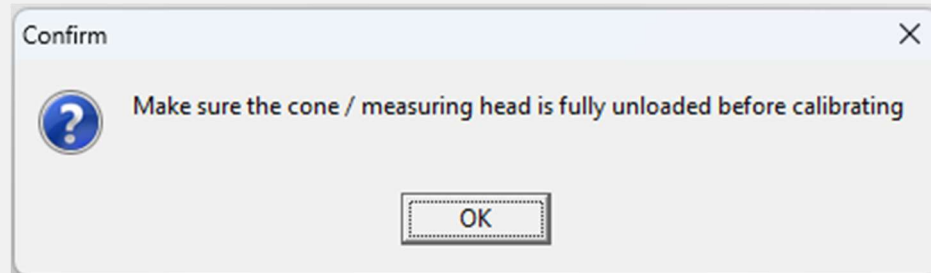
For confirmation purposes the window shown below will appear.



Once you have confirmed to finalise the CPT, the window shown below will appear.



ATTENTION

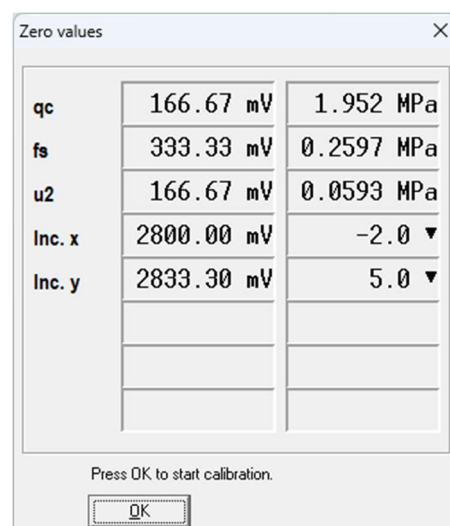


After click on ‘*OK*’ or on the Enter key a window will appear where the zero values of the cone or measuring head are shown.

The zero values of all selected measuring channels that were chosen in ‘*View & Logging*’ under the option ‘*View signal*’ are displayed.

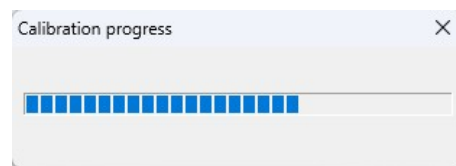
This will give you the opportunity to compare the currently detected zero values with the calibrated zero values. If the zero values are correct, you click on ‘*OK*’ or on the Enter key.

Now the program will proceed to record an actual calibration of the cone or measuring head. This means that outputs of the cone/measuring head will be synchronized to a load of zero. It is

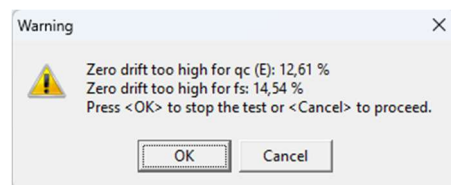


therefore very important that the cone/measuring head is not loaded during calibration.

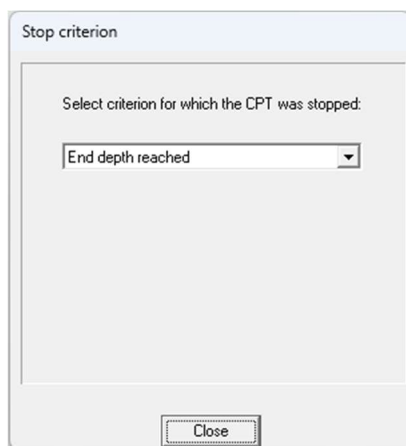
While determining the zero values, the window shown next to this text is displayed. The process is completed when the bar is completely blue.



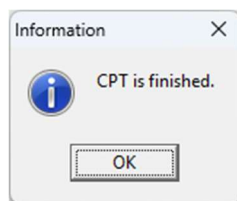
If the current zero values deviate too much from the zero values in the calibration data, the program will issue an error message. An example of this is shown alongside. The permitted deviation can be set in the settings screen under the 'Max Zero Deviation' tab.



If the calibration process runs without problems, the program will automatically the window shown below will appear.



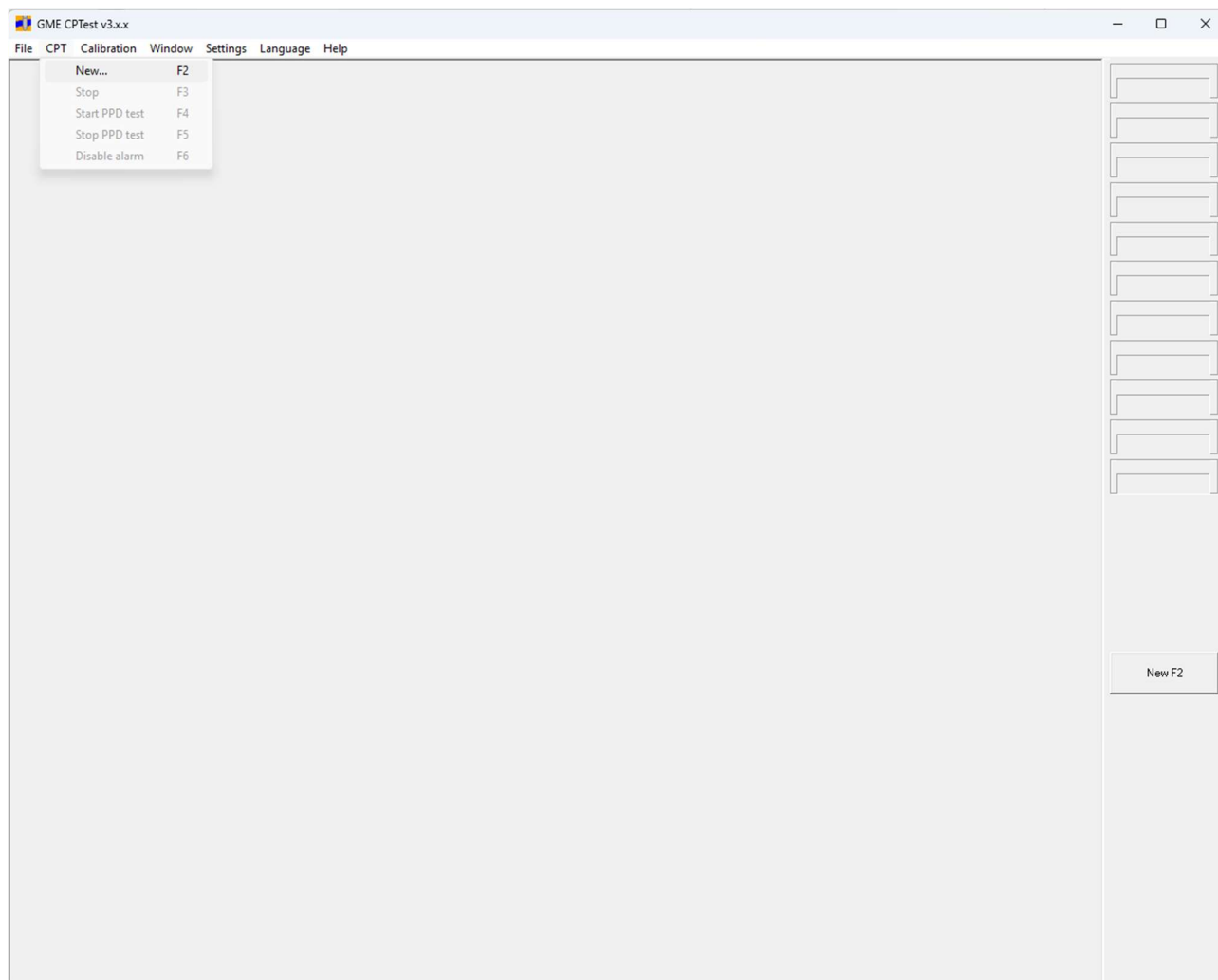
For the completion of the whole process (and thus the CPT performed) the screen shown below will be displayed.



Upon confirmation by clicking 'OK' or pressing the Enter key, you will return to the main menu screen of CPTest. You can now directly start a new CPT, see paragraph 0 Starting a CPT - The 'New' menu (F2)

6 CPT OFFSHORE

In the main screen, in the 'CPT' menu, you can start a new CPT measurement and also stop it when it is completed.



Since the actions performed in this menu are most frequently used, the corresponding commands can also be invoked by using function keys.

The function key reservation is given in the different menu items. In addition, the available command key(s) are displayed as control buttons in the lower right corner and you can also use the mouse to click on directly.

6.1 Starting a CPT - The 'New' menu (F2)

After choosing this option by selecting 'CPT' -> 'New', clicking the New F2 control button or pressing the 'F2' function key, the 'CPT Information' screen will appear with the 'Basic' tab displayed by default.

In this screen you have to enter the respective project description. The program will automatically show the project information used for the last performed test, while the CPT number is automatically assigned. You can overwrite the information at any time, e.g., when you start a new project or if the automatically assigned CPT number is not in accordance with your demands.

Before you actually start the CPT, it is important that you choose the correct measuring device from a list of available units. For this purpose you click on the button on the right side of the text 'Cone', upon which a selection screen will appear. Choose the desired file name, and the correct calibration data will be used for the new CPT.

After entering all relevant information click on 'OK' or press the Enter key. A window will appear to start the deck zero measurement.

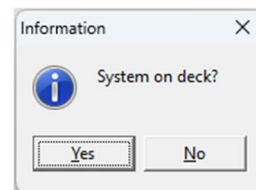
6.2 Measure zeroes deck

Click on 'Yes' or press the Enter key to confirm that the system is on the deck.

A window will appear where the zero values of the cone or measuring head are shown.

The zero values of all selected measuring channels that were chosen in 'View & Logging' under the option 'View signal' are displayed.

This will give you the opportunity to compare the currently detected zero values with the calibrated zero values. If the zero values are correct, you click on 'Zeroes'.

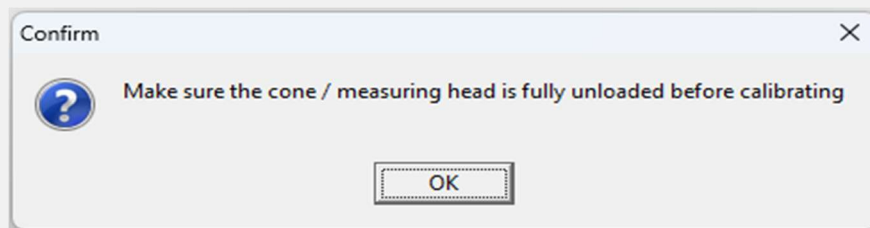


| Zero values DS15CFIIP.S19040.cal | | | | | | |
|----------------------------------|----------------|-----------------|-----------------|-------------------|-------------------|--|
| Zero values | CH 01 | CH 02 | CH 03 | CH 04 | CH 05 | |
| Parameter | qc [MPa] | fs [MPa] | u2 [MPa] | Inclination x [°] | Inclination y [°] | |
| Actual | 1.952 (167 mV) | 0.2597 (333 mV) | 0.0593 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | |
| Calibration | 0.000 (0 mV) | 0.0000 (0 mV) | 0.0000 (0 mV) | 0.0 (2829 mV) | 0.0 (2759 mV) | |
| Deviation | 1.952 (167 mV) | 0.2597 (333 mV) | 0.0593 (167 mV) | -2.0 (-29 mV) | 5.0 (74 mV) | |
| Deviation [% of FSD] | 2.0% | 3.9% | 2.9% | | | |
| Start deck | | | | | | |
| End deck | | | | | | |
| Deviation | | | | | | |
| Start CPT | | | | | | |
| End CPT | | | | | | |
| Deviation | | | | | | |

Buttons: Zeroes, Continue, Stop



ATTENTION



Now the program will proceed to record an actual calibration of the cone or measuring head. This means that outputs of the cone/measuring head will be synchronised to a load of zero. It is therefore very important that the cone/measuring head is not loaded during calibration.

| Zero values DS15CFIIP.S19040.cal | | | | | | |
|----------------------------------|----------------|-----------------|-----------------|-------------------|-------------------|--|
| Zero values | CH 01 | CH 02 | CH 03 | CH 04 | CH 05 | |
| Parameter | qc [MPa] | fs [MPa] | u2 [MPa] | Inclination x [°] | Inclination y [°] | |
| Actual | 1.952 (167 mV) | 0.2597 (333 mV) | 0.0593 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | |
| Calibration | 0.000 (0 mV) | 0.0000 (0 mV) | 0.0000 (0 mV) | 0.0 (2829 mV) | 0.0 (2759 mV) | |
| Deviation | 1.952 (167 mV) | 0.2597 (333 mV) | 0.0593 (167 mV) | -2.0 (-29 mV) | 5.0 (74 mV) | |
| Deviation [% of FSD] | 2.0% | 3.9% | 2.9% | | | |
| Start deck | | | | | | |
| End deck | | | | | | |
| Deviation | | | | | | |
| Start CPT | | | | | | |
| End CPT | | | | | | |
| Deviation | | | | | | |

Buttons: Zeroes, Continue, Stop

While determining the zero values, the window shown next to this text is displayed. The process is completed when the bar is completely blue.

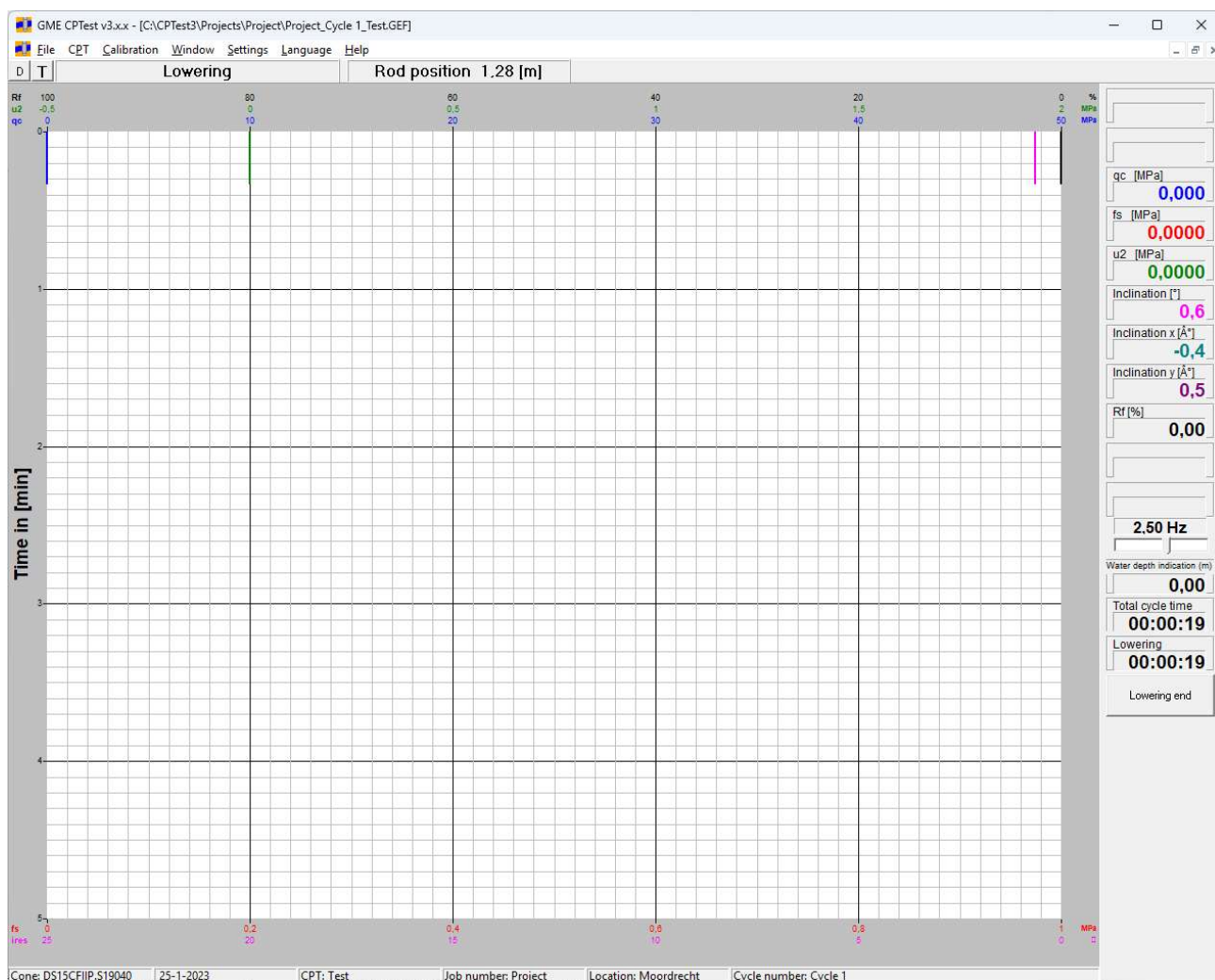
| Zero values DS15CFIIP.S19040.cal | | | | | | |
|----------------------------------|----------------|-----------------|-----------------|-------------------|-------------------|--|
| Zero values | CH 01 | CH 02 | CH 03 | CH 04 | CH 05 | |
| Parameter | qc [MPa] | fs [MPa] | u2 [MPa] | Inclination x [°] | Inclination y [°] | |
| Actual | 1.952 (167 mV) | 0.2597 (333 mV) | 0.0593 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | |
| Calibration | 0.000 (0 mV) | 0.0000 (0 mV) | 0.0000 (0 mV) | 0.0 (2829 mV) | 0.0 (2759 mV) | |
| Deviation | 1.952 (167 mV) | 0.2597 (333 mV) | 0.0593 (167 mV) | -2.0 (-29 mV) | 5.0 (74 mV) | |
| Deviation [% of FSD] | 2.0% | 3.9% | 2.9% | | | |
| Start deck | 1.952 (167 mV) | 0.2597 (333 mV) | 0.0593 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | |
| End deck | | | | | | |
| Deviation | | | | | | |
| Start CPT | | | | | | |
| End CPT | | | | | | |
| Deviation | | | | | | |

Progress bar: [Blue bar]

Buttons: [Zeroes] [Continue] [Stop]

6.3 Lowering

In the lowering process the data is displayed in time mode.



To end the lowering process, click on 'Lowering end'

Click 'Yes' or press the Enter key to stop the lowering process and proceed to measure zeroes Start CPT.



6.4 Measure zeroes Start CPT

A window will appear where the zero values of the cone or measuring head are shown.

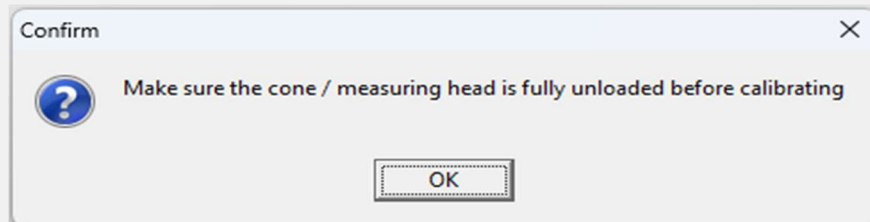
zero values of all selected measuring channels that were chosen in 'View & Logging' under the option 'View signal' are displayed.

This will give you the opportunity to compare the currently detected zero values with the calibrated zero values. If the zero values are correct, you click on 'Zeroes'.

| Zero values DS15CFIIP.S19040.cal | | | | | | |
|----------------------------------|----------------|-----------------|-----------------|-------------------|-------------------|--|
| Zero values | CH 01 | CH 02 | CH 03 | CH 04 | CH 05 | |
| Parameter | qc [MPa] | fs [MPa] | u2 [MPa] | Inclination x [°] | Inclination y [°] | |
| Actual | 1,952 (167 mV) | 0,2597 (333 mV) | 0,0593 (167 mV) | -2,0 (2800 mV) | 5,0 (2833 mV) | |
| Calibration | 0,000 (0 mV) | 0,0000 (0 mV) | 0,0000 (0 mV) | 0,0 (2829 mV) | 0,0 (2759 mV) | |
| Deviation | 1,952 (167 mV) | 0,2597 (333 mV) | 0,0593 (167 mV) | -2,0 (-29 mV) | 5,0 (74 mV) | |
| Deviation [% of FSD] | 2,0% | 3,9% | 2,9% | | | |
| Start deck | 1,952 (167 mV) | 0,2597 (333 mV) | 0,0593 (167 mV) | -2,0 (2800 mV) | 5,0 (2833 mV) | |
| End deck | | | | | | |
| Deviation | | | | | | |
| Start CPT | | | | | | |
| End CPT | | | | | | |
| Deviation | | | | | | |



ATTENTION



Now the program will proceed to record an actual calibration of the cone or measuring head. This means that outputs of the cone/measuring head will be synchronized to a load of "zero". It is therefore very important that the cone/measuring head is not loaded during calibration.

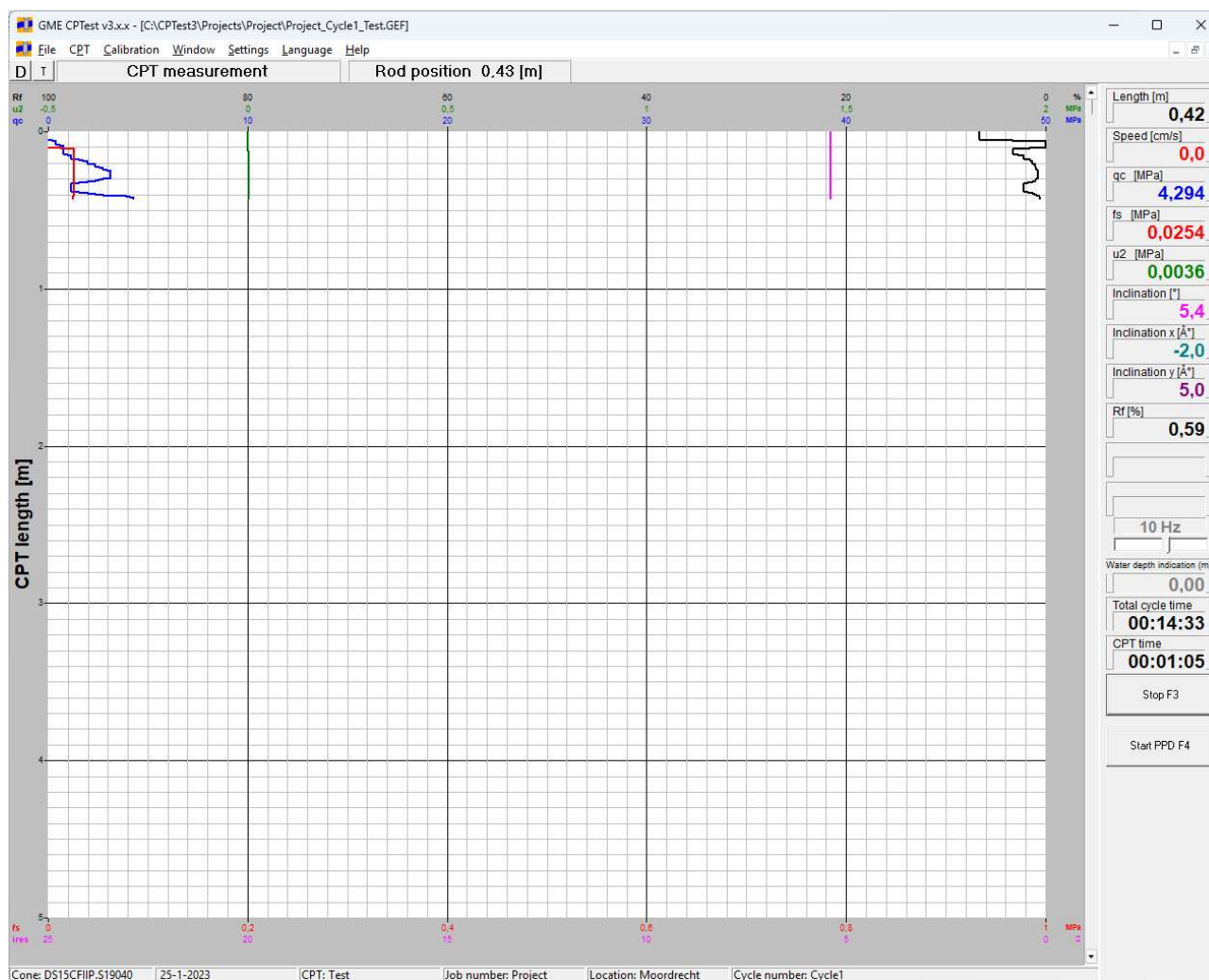
| Zero values DS15CFIIP.S19040.cal | | | | | | |
|----------------------------------|----------------|-----------------|-----------------|-------------------|-------------------|--|
| Zero values | CH 01 | CH 02 | CH 03 | CH 04 | CH 05 | |
| Parameter | qc [MPa] | fs [MPa] | u2 [MPa] | Inclination x [°] | Inclination y [°] | |
| Actual | 1,952 (167 mV) | 0,2597 (333 mV) | 0,0593 (167 mV) | -2,0 (2800 mV) | 5,0 (2833 mV) | |
| Calibration | 0,000 (0 mV) | 0,0000 (0 mV) | 0,0000 (0 mV) | 0,0 (2829 mV) | 0,0 (2759 mV) | |
| Deviation | 1,952 (167 mV) | 0,2597 (333 mV) | 0,0593 (167 mV) | -2,0 (-29 mV) | 5,0 (74 mV) | |
| Deviation [% of FSD] | 2,0% | 3,9% | 2,9% | | | |
| Start deck | 1,952 (167 mV) | 0,2597 (333 mV) | 0,0593 (167 mV) | -2,0 (2800 mV) | 5,0 (2833 mV) | |
| End deck | | | | | | |
| Deviation | | | | | | |
| Start CPT | | | | | | |
| End CPT | | | | | | |
| Deviation | | | | | | |

While determining the zero values, the window shown next to this text is displayed. The process is completed when the bar is completely blue.

| Zero values DS15CFIIP.S19040.cal | | | | | | |
|----------------------------------|----------------|-----------------|-----------------|-------------------|-------------------|--|
| Zero values | CH 01 | CH 02 | CH 03 | CH 04 | CH 05 | |
| Parameter | qc [MPa] | fs [MPa] | u2 [MPa] | Inclination x [°] | Inclination y [°] | |
| Actual | 1,952 (167 mV) | 0,2597 (333 mV) | 0,0593 (167 mV) | -2,0 (2800 mV) | 5,0 (2833 mV) | |
| Calibration | 0,000 (0 mV) | 0,0000 (0 mV) | 0,0000 (0 mV) | 0,0 (2829 mV) | 0,0 (2759 mV) | |
| Deviation | 1,952 (167 mV) | 0,2597 (333 mV) | 0,0593 (167 mV) | -2,0 (-29 mV) | 5,0 (74 mV) | |
| Deviation [% of FSO] | 2,0% | 3,9% | 2,9% | | | |
| Start deck | 1,952 (167 mV) | 0,2597 (333 mV) | 0,0593 (167 mV) | -2,0 (2800 mV) | 5,0 (2833 mV) | |
| End deck | | | | | | |
| Deviation | | | | | | |
| Start CPT | 1,952 (167 mV) | 0,2597 (333 mV) | 0,0593 (167 mV) | -2,0 (2800 mV) | 5,0 (2833 mV) | |
| End CPT | | | | | | |
| Deviation | | | | | | |

6.5 CPT measurement

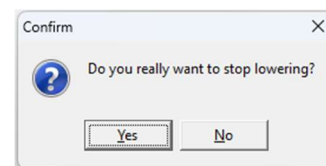
Below you can see an example of the sounding screen, in this case of a fictitious electrical CPT.



6.6 Terminating the CPT - The 'Stop' menu (F3)

If you wish to terminate the CPT, click the control button 'Stop', press function key (F3) or choose the menu 'CPT' -> 'Stop'.

For confirmation purposes the window shown below will appear.



Click 'Yes' or press the Enter key to stop the lowering process and proceed to measure zeroes Start CPT.

6.7 Measure zeroes End CPT

A window will appear where the zero values of the cone or measuring head are shown.

The zero values of all selected measuring channels that were chosen in 'View & Logging' under the option 'View signal' are displayed.

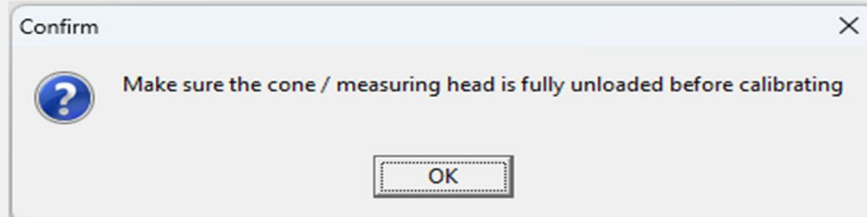
| Zero values DS15CFIIP.S19040.cal | | | | | | |
|----------------------------------|----------------|-----------------|-----------------|-------------------|-------------------|--|
| Zero values | CH 01 | CH 02 | CH 03 | CH 04 | CH 05 | |
| Parameter | qc [MPa] | fs [MPa] | u2 [MPa] | Inclination x [°] | Inclination y [°] | |
| Actual | 1.952 (167 mV) | 0.2597 (333 mV) | 0.0593 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | |
| Calibration | 0.000 (0 mV) | 0.0000 (0 mV) | 0.0000 (0 mV) | 0.0 (2829 mV) | 0.0 (2759 mV) | |
| Deviation | 1.952 (167 mV) | 0.2597 (333 mV) | 0.0593 (167 mV) | -2.0 (-29 mV) | 5.0 (74 mV) | |
| Deviation [% of FSD] | 2.0% | 3.9% | 2.9% | | | |
| Start deck | 1.952 (167 mV) | 0.2597 (333 mV) | 0.0593 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | |
| End deck | | | | | | |
| Deviation | | | | | | |
| Start CPT | 1.952 (167 mV) | 0.2597 (333 mV) | 0.0593 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | |
| End CPT | | | | | | |
| Deviation | | | | | | |

This will give you the opportunity to compare the currently detected zero values with the calibrated zero values. If the zero values are correct, you click on 'Zeroes'.

| Zero values DS15CFIIP.S19040.cal | | | | | | |
|----------------------------------|----------------|-----------------|-----------------|-------------------|-------------------|--|
| Zero values | CH 01 | CH 02 | CH 03 | CH 04 | CH 05 | |
| Parameter | qc [MPa] | fs [MPa] | u2 [MPa] | Inclination x [°] | Inclination y [°] | |
| Actual | 1.952 (167 mV) | 0.2597 (333 mV) | 0.0593 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | |
| Calibration | 0.000 (0 mV) | 0.0000 (0 mV) | 0.0000 (0 mV) | 0.0 (2829 mV) | 0.0 (2759 mV) | |
| Deviation | 1.952 (167 mV) | 0.2597 (333 mV) | 0.0593 (167 mV) | -2.0 (-29 mV) | 5.0 (74 mV) | |
| Deviation [% of FSD] | 2.0% | 3.9% | 2.9% | | | |
| Start deck | 1.952 (167 mV) | 0.2597 (333 mV) | 0.0593 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | |
| End deck | | | | | | |
| Deviation | | | | | | |
| Start CPT | 1.952 (167 mV) | 0.2597 (333 mV) | 0.0593 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | |
| End CPT | | | | | | |
| Deviation | | | | | | |



ATTENTION



Now the program will proceed to record an actual calibration of the cone or measuring head. This means that outputs of the cone/measuring head will be synchronized to a load of “zero”. It is therefore very important that the cone/measuring head is not loaded during calibration.

While determining the zero values, the window shown next to this text is displayed. The process is completed when the bar is completely blue.

| Zero values DS15CFIP.S19040.cal | | | | | | |
|---------------------------------|----------------|-----------------|-----------------|-------------------|-------------------|--|
| Zero values | CH 01 | CH 02 | CH 03 | CH 04 | CH 05 | |
| Parameter | qc [MPa] | fs [MPa] | u2 [MPa] | Inclination x [°] | Inclination y [°] | |
| Actual | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | |
| Calibration | 0.000 (0 mV) | 0.0000 (0 mV) | 0.0000 (0 mV) | 0.0 (2829 mV) | 0.0 (2759 mV) | |
| Deviation | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (-29 mV) | 5.0 (74 mV) | |
| Deviation [% of FSD] | 0.0% | 0.0% | 0.0% | | | |
| Start deck | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | |
| End deck | | | | | | |
| Deviation | | | | | | |
| Start CPT | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | |
| End CPT | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | |
| Deviation | 0.000 (0 mV) | 0.0000 (0 mV) | 0.0000 (0 mV) | 0.0 (0 mV) | 0.0 (0 mV) | |

Progress bar: [A bar consisting of 100 small blue squares, all of which are filled, indicating 100% completion.]

Buttons: [Zeros] [Continue] [Stop]

In the stop criteria screen the reason for terminating the CPT test can be indicated.

Stop criterion

Select criterion for which the CPT was stopped:

End depth reached

Close

6.8 Complete the test or start a new test in the same cycle.

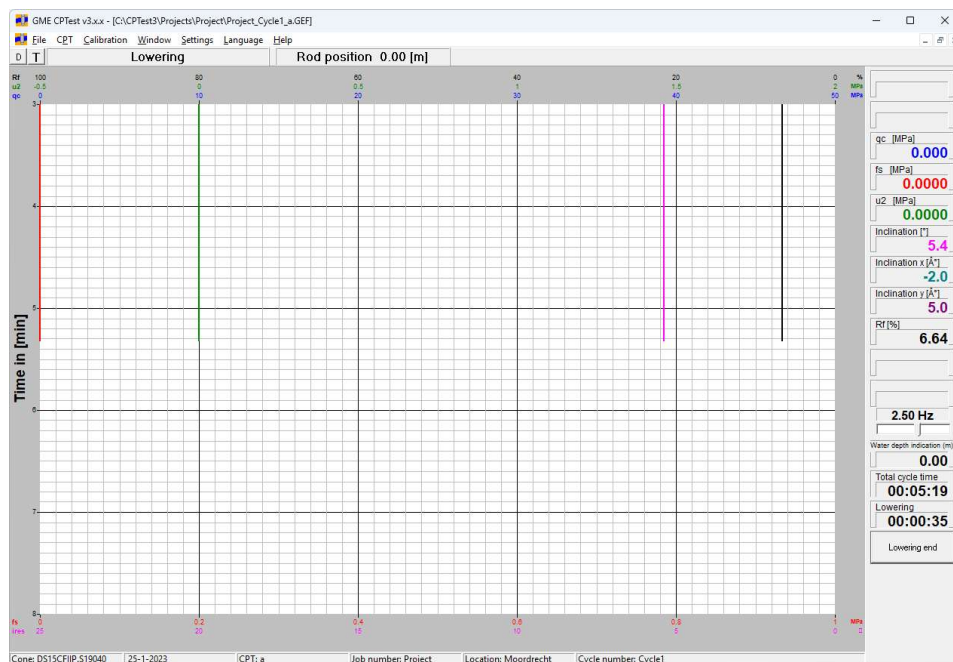
If it is confirmed to end the test cycle with ‘Yes’, the test will be completed and continued in **section 6.9 hoisting end**.

Confirm

End test cycle?

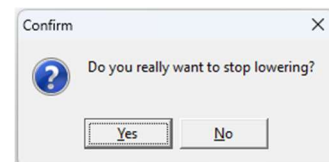
Yes No

If the test cycle is not terminated, a new test is created in the same cycle. The software continues in lowering mode.



To end the lowering process, click on 'Lowering end'

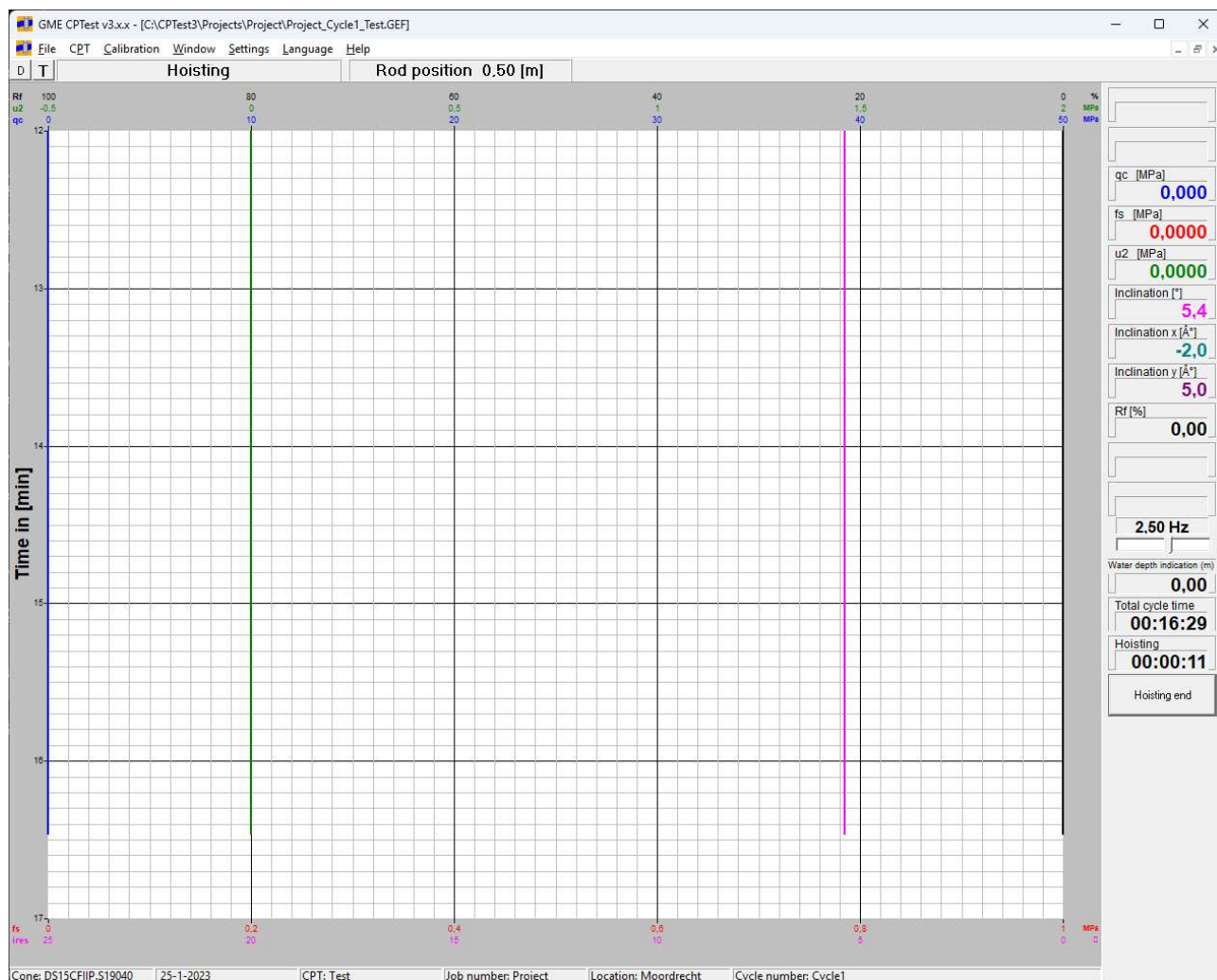
Click 'Yes' or press the Enter key to stop the lowering process and proceed to CPT information and change the Test ID.



To continue with the new measurement, confirm with 'OK' and proceed with taking the zero values and continued in **Measure zeroes**
Start CPT in section 6.4.

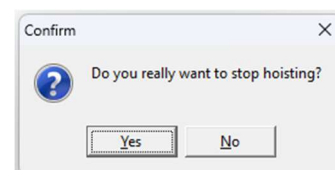
6.9 Hoisting end

In the hoisting end process the data is displayed in time mode.



To end the lowering process, click on 'Hoisting end'

Click 'Yes' or press the Enter key to stop the hoisting process and proceed to measure zeroes End Deck.



6.10 Measure zeroes End Deck

A window will appear where the zero values of the cone or measuring head are shown.

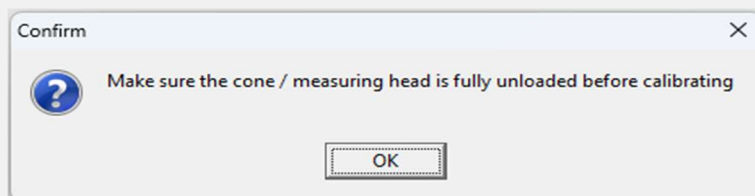
The zero values of all selected measuring channels that were chosen in 'View & Logging' under the option 'View signal' are displayed.

This will give you the opportunity to compare the currently detected zero values with the calibrated zero values. If the zero values are correct, you click on 'Zeroes'.

| Zero values | CH 01 | CH 02 | CH 03 | CH 04 | CH 05 | | |
|----------------------|----------------|-----------------|-----------------|-------------------|-------------------|--|--|
| Parameter | qc [MPa] | fs [MPa] | u2 [MPa] | Inclination x [°] | Inclination y [°] | | |
| Actual | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | | |
| Calibration | 0.000 (0 mV) | 0.0000 (0 mV) | 0.0000 (0 mV) | 0.0 (2829 mV) | 0.0 (2759 mV) | | |
| Deviation | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (-29 mV) | 5.0 (74 mV) | | |
| Deviation [% of FSO] | 0.0% | 0.0% | 0.0% | | | | |
| Start deck | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | | |
| End deck | | | | | | | |
| Deviation | | | | | | | |
| Start CPT | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | | |
| End CPT | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | | |
| Deviation | 0.000 (0 mV) | 0.0000 (0 mV) | 0.0000 (0 mV) | 0.0 (0 mV) | 0.0 (0 mV) | | |



ATTENTION



This will give you the opportunity to compare the currently detected zero values with the calibrated zero values. If the zero values are correct, you click on 'Zeroes'.

| Zero values | CH 01 | CH 02 | CH 03 | CH 04 | CH 05 | | |
|----------------------|----------------|-----------------|-----------------|-------------------|-------------------|--|--|
| Parameter | qc [MPa] | fs [MPa] | u2 [MPa] | Inclination x [°] | Inclination y [°] | | |
| Actual | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | | |
| Calibration | 0.000 (0 mV) | 0.0000 (0 mV) | 0.0000 (0 mV) | 0.0 (2829 mV) | 0.0 (2759 mV) | | |
| Deviation | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (-29 mV) | 5.0 (74 mV) | | |
| Deviation [% of FSO] | 0.0% | 0.0% | 0.0% | | | | |
| Start deck | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | | |
| End deck | | | | | | | |
| Deviation | | | | | | | |
| Start CPT | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | | |
| End CPT | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | | |
| Deviation | 0.000 (0 mV) | 0.0000 (0 mV) | 0.0000 (0 mV) | 0.0 (0 mV) | 0.0 (0 mV) | | |

Now the program will proceed to record an actual calibration of the cone or measuring head. This means that outputs of the cone/measuring head will be synchronized to a load of zero. It is therefore very important that the cone/measuring head is not loaded during calibration.

| Zero values | CH 01 | CH 02 | CH 03 | CH 04 | CH 05 | | |
|----------------------|----------------|-----------------|-----------------|-------------------|-------------------|--|--|
| Parameter | qc [MPa] | fs [MPa] | u2 [MPa] | Inclination x [°] | Inclination y [°] | | |
| Actual | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | | |
| Calibration | 0.000 (0 mV) | 0.0000 (0 mV) | 0.0000 (0 mV) | 0.0 (2829 mV) | 0.0 (2759 mV) | | |
| Deviation | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (-29 mV) | 5.0 (74 mV) | | |
| Deviation [% of FSO] | 0.0% | 0.0% | 0.0% | | | | |
| Start deck | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | | |
| End deck | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | | |
| Deviation | 0.000 (0 mV) | 0.0000 (0 mV) | 0.0000 (0 mV) | 0.0 (0 mV) | 0.0 (0 mV) | | |
| Start CPT | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | | |
| End CPT | 1.952 (167 mV) | 0.0002 (333 mV) | 0.0000 (167 mV) | -2.0 (2800 mV) | 5.0 (2833 mV) | | |
| Deviation | 0.000 (0 mV) | 0.0000 (0 mV) | 0.0000 (0 mV) | 0.0 (0 mV) | 0.0 (0 mV) | | |

6.11 Display of end measurement

After closing the CPT meeting, you will return to the main screen of CPTest.

