Vane-Log

Data Acquisition Software for Geotech´s Electrical Vane Apparatus

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Installation

To install Vane-Log, connect the HASP key in a free USB slot, then insert the Vane-Log CD into the CD-drive and run `setup.exe`. The installation follows the standard Install Shield procedure. Follow the instructions on the screen. Keep the HASP key connected for proper functionality at all times.

Structure

Vane-Log starts in acquisition mode, ready to run a new vane test.

![Vane-Log start-up screen.](image)

In the left margin you can find three tabs: Acquisition, Settings and Quick jump.

The **Settings** tab activates the settings bar with buttons for different types of settings. You can choose between Communication, Test info, Range options and Color options.

The **Quick jump** tab activates the quick jump bar from which you can start the presentation module by clicking Presentation or browse for vane test data files by clicking Thumbnails.
Acquisition

To make a new data acquisition, click New Test in the Acquisition tab, or press F1.

Fill in the Test info sheet and press OK.

Note: It is very important to set the right vane type since this affects the obtained data.

Specify the directory and filename to save the data and press OK.
The program now starts a zero reading of the gauges. The zero value should be in the interval 15 – 40. If the zero value fall essentially under that interval, immediate service is needed. Wait until the zero reading is finished and press **OK**.

You are now ready to make the first turn.

When the depth for the first turn is reached, press *Start turn, or F2*, to start the vane tester. Enter depth level and press **OK**. Verify the depth in the appearing dialogue box.

If it is desired to remould at the same depth as the previous turn, press the *Remoulded* button. The depth will remain, but the third decimal will be replaced with a serial number, starting at one, that increments each turn when remoulding is selected.
During the test the torque graph is presented on the screen.

The first part of the curve shows only rod friction and when the vane starts to turn in the ground the curve shows the rod friction and the vane torque together. Use the mouse pointer to place the vertical line right before the point where the vane torque starts to increase. The program calculates the shear force assuming that the force registered on the left side of the line is rod friction and the force registered on the right side of the line is rod friction plus vane torque. On the scale to the right you can see the shear force.

When the ground material brakes, press End turn, or F3. Make the same procedure on each depth. After the last turn is ended, press End test, or F6. The vane test is now completed.

After the test is ended, all data is saved automatically in the file specified at the test start. There is however a possibility to immediately save the data to an additional backup file, for example on a USB flash memory. If you want to save a backup file, answer Yes when the dialogue box appears.
Settings

In the settings module changes in the acquisition software can be made. Select the settings tab and choose one of the options.

Communication

Serial port settings.

Test info

Opens the Test info sheet

Range options

Settings for torque, angle and shear strength ranges.

To change the units, open Settings \(\rightarrow\) Range options, or press F7, and then press the Units button.
Now you can change the units for the Depth, Torque and Shear strength scales.

**Color options**

Settings for background and buttons color.

**Bars**

Viewing options for the test. Select or unselect *Angle/Torque* and *Max Torque/Rotation speed*.

**Depth confirmation**

Select or unselect depth confirmation.
Presentation

In the presentation module you can open files for viewing, editing and printing. Select the Quick jump tab and press Thumbnails.

If the above sign appears when the presentation module is activated, make sure that the HASP key is connected, and press the Retry-button. The HASP key enables editing, saving and printing of the test files. By pressing the OK-button files can only be viewed in demo mode.

In the window that appears you can browse the hard drive for vane test data files. When you select a folder in the left part of the window, the files in it will appear as thumbnails in the right lower part of the window. In the right upper part of the window you can see the test information of the thumbnail you select.
To open a file for viewing you double click the thumbnail. The file is shown in a new window called Vane graph. It starts default with the Standard chart-tab open. The Standard chart presents the Torque/Speed-graphs. For a graphical view of other parameters, open the Extended chart-tab.

View of a vane test. Extended chart.
Settings
The settings in Vanegraph are made under Edit.

Options

Extended chart settings

Standard chart settings

Single graph settings

Settings for units and sheet appearance
Test info

Displays the test info sheet.

Chart settings

Range and color settings for the graphs in Standard chart and Extended chart.

Table edit

Editing and additions to test information.

Viewing options.

In the upper part of the window you can set viewing options for the vane chart.

These options are:
1. Depth scale for the shear force.
2. Viewing size.
3. Show speed. If this is marked the speed will be shown in the graph.
4. Show rod friction. If this is marked a red cursor will appear in the graph. It should be used for specifying the rod friction of the curve.
5. Depth selection.
6. Restore from file. Loads the current file without changes.

Speed shown in graph.

Rod friction specified in graph.
**Remoulded tests**

It is possible to use remoulded tests to calculate soil sensitivity.

Undrained and remoulded turns.

**Change units**

To change units, open *Edit → Options* and then select the *All*-tab and push the *Units* button.

Now you could change the units for the Depth, Torque and Shear strength scales.
Create vb1-files for import to AutoGRAF software

The original vct-file can easily be converted to a vb1-file through these steps.

1. Open the desired file in Vane graph.
2. Open File → Save As…
3. Write or select the file name and select the *vib file format.
4. Press Save

This action creates two copies of the file in each vib and vb1 formats.

Export file as an image

To convert the file into an image format:

1. Open the desired file in Vane graph
2. Open File → Export
3. Select target directory
4. Write file name without file extension
5. Select file type: bmp, jpg or gif
6. Press Save