

What's new in RheoWin

Version 4.93.0003

(Released 22.04.2024)

Below is a list of things that are new and/or changed in version 4.93.0003 compared with version 4.92.0007 of RheoWin.

General

Compatible Windows Versions

- Starting from version 4.92.0007 RheoWin is *not* compatible with Windows 7 and Windows 8(.1) anymore.

Quantities and Units

- Units that contain a multiplication of other units are now displayed correctly using a dot as the multiplication sign.
Example: The unit for the quantity viscosity is now displayed as Pa·s and not as Pas or Pa s.

Installation

Entering the installation key

- Entering the installation key using the numeric keypad of the keyboard was troublesome. This has been improved.

Displaying the what's new file

- The RheoWin_New.pdf file is now optionally displayed at the end of the installation (instead of the same file in Word format).

Installation of examples files

- The operator is not asked anymore whether existing example files should be overwritten.
- The example library contains a few new job and data files, several existing job have been improved/corrected.

DeviceManager / Device Drivers

VT iQ (Air) redesign

- For a quicker identification, the name of the redesigned VT iQ (Air) version is now displayed as HAAKE Viscotester iQ-R respectively HAAKE Viscotester iQ Air-R in the Info/Protocol window, where the R stands for redesigned.

MARS iQ (Air)

- The **Inertia** determination routine now also works for the MARS iQ (Air).
- The **TMC** determination routine can now be started from the DeviceManager.

MARS 40/60 and MARS iQ (Air)

- When starting the **MSC** or **TMC** or **Inertia** determination routine RheoWin now automatically checks which rotor is attached to the rheometer and saves the measured value(s) for the correct rotor, or for the rheometer itself when no rotor is attached.

VT iQ (Air) and MARS iQ (Air)

- When initializing the communication between RheoWin and a VT iQ (Air) or a MARS iQ (Air) the status of the UDP protocol is now checked. When the UDP protocol is blocked by a Firewall a message will be displayed.

Note that the UDP protocol is needed for launching a Job from the MARS iQ (Air) touchscreen, for ConnectAssist messages, and for firmware updates.

Geometries

- In the names of a few predefined cone rotors the cone angle was written as 1.0°, 2.0°, 4.0° etc., this has been changed to 1°, 2°, 4° etc. as with all other cone rotors.
- Three new geometries, two ball rotors and one disc rotor, according to ISO 2884 have been added to the list of rotors. These new rotors are [B19 ISO2884/SS](#), [B32 ISO2884/SS](#) and [D58 ISO2884/SS](#). The geometry factors of these rotors are calibrated such that they give the same viscosity result as when used in a Rotothinner viscometer.

Diagnosis window

- The name of the TM-PE-P was incorrectly displayed as TM-EL-P when it was used in combination with a TM-EL-H.
- When the TM-EL-H was installed without a lower TM-xx-x module the text box for the lower module was not empty. This has been solved.

JobManager

Main toolbar

- Since RheoWin 4.91.0000 certain toolbar buttons for file functions (Open, Save, etc.) were not disabled (not greyed out) when the corresponding privileges in the UserManager were disabled. This has been solved.

Device toolbar

- The display (positioning, greyed out version) of certain buttons in the device toolbar was not correct. This has been solved.

RheoWizard

- Starting from RheoWin version 4.91.0021 the RheoWizard did not work anymore. This has been solved.

JobEditor

- The default setting (for a new Job) of the **Display > General > Graph > Mode** option is now set to **Auto** (instead of **Default**). This ensures that the (internal) Graph settings defined in a measuring element are automatically used.
- When starting a Job for which the selected **Rheometer** was not setup correctly (for example a wrong IP address) an error message about a problem with the **Temperature controller** (instead of the Rheometer) was displayed. This has been changed.
- Under certain circumstances, when editing a Job for a MARS 40/60, a **ConnectAssist** message with no geometry name popped-up for no good reason. This has been solved.

Monitor/Manual control window

- On slower computers when using a MARS iQ (Air) the Monitor window would freeze after being opened. This has been solved.

Lift element

- The option **When gap <=** now also applies to the **Use Autotension** option.

Goto element

- The Goto element would crash when the start or end value of the set value, that was selected to be changed during a Job run, was zero. This has been solved. Now an error message is displayed and the Job is canceled.

- Under certain circumstances a Job which uses a Goto element with a high number of repetitions (> 60) would crash. This has been solved.

OSC time element

- When the **Take from previous** option was selected for the Stress/Strain value it was still possible to manually enter a value. This has been solved.

OSC frequency sweep element

- When selecting **Mode > CD** and **Distribution > Table** but leaving the frequency table empty RheoWin would crash. This has been solved.

OSC amplitude sweep element

- For a MARS iQ (Air) using the options **Mode > CD** and **Distribution > Table** at the same time did not work. This has been solved.

Multiwave element

- This element did not work correctly when it was not the first measuring element in a Job. This has been solved.

SER element

- This element can now capture and save images from a camera. This mainly meant for use with TM-CR-O450 oven.

Advanced Curve Discussion element

- Under certain circumstances the calculated value for the **Inflection point** was slightly wrong. Instead of the correct value, the value of the previous or next data point was returned. This has been solved.

LVR element

- The option **Calculate LVR based on** was moved to the **Settings** box.
- The option **Manual limiting values** in the **Calculation mode** box now work as intended. It possible to enter a start or end limiting value only.

Math element

- There is now a 5th equation which allows to calculate the **Min** (minimum), **Max** (maximum), **Sum** (sum), **Mean** (mean), **SD²** (variance), **SD** (standard deviation), **RSD** (relative standard deviation) and the **%RSD** (percentual relative standard deviation) of up to 10 values which must be entered in one edit field as R_IDx_Py_z parameters separated by one or more spaces. See the example file Evaluation-only (18, Math, Statistics).rwj.

DataManager

Data select dialog

- In a data select dialog the ID of the measurement element with which a data segment was measured is now displayed in front of the element name. The data segment is now listed as **ID2: Rot Time**, instead of just **Rot Time**.

Modify/Transform/Add data

- There is a new function **Add to data: m (= Fn/9.81)**
Using this command a mass value $m = F_n/9.81$ is calculated and added to any data segment which includes normal force data. The new data is automatically saved in the selected file.

- There is a new function [Add to Axial data: \$\sigma\$ -n, d-sample \(Squeeze\)](#)
Using this command a (theoretical) sample diameter is calculated from the initial sample diameter (entered by the operator) as a function of the (measured) sample height and by assuming that the sample is incompressible.
From the (theoretical) sample diameter and the measured normal force F_n a normal stress value σ -n = $F_n / (0.24 \pi d\text{-sample}^2)$ is calculated.
Both σ -n and d-sample values are added to any data segment which includes normal force data. The operator is asked for the initial sample diameter value which is needed for the calculation. The new data is automatically saved in the selected file.
- There is a new function [Normalize data](#)
Using this command the value of any (selected) measured quantity Q can be normalized using four (six) different methods:
 - The data is normalized to the minimum, maximum or mean value of all the data of the quantity.
 - The data is normalized to a value entered by the operator in a dialog.
 - The data is normalized to the value at a certain value of another quantity.
The other quantity and its value can be selected resp. edited by the operator in a dialog.
 - The data is normalized to the mean value in a certain range of another quantity.
The other quantity and its range can be selected resp. edited by the operator in a dialog.
 The new data is automatically saved in the selected file using a selectable new subquantity [Normalized-x](#) (where x is 1...5).
The names of the five [Normalized-x](#) subquantities can be edited in the **Quantity/Units** dialog.
- There is a new function [Modify data](#)
Using this command the value of any (selected) measured quantity Q can be modified using the equation $Q_{\text{new}} = Q \cdot a + b$. The modified data is automatically saved in a new file with [_mod](#) added to the original file name (and in the same directory). The new file is automatically loaded and added to the active page.
The quantity Q can be selected, and the values of a and b can be edited in a dialog by the operator.

Temperature offset calibration tool

Several improvements

- There is a new option [Fixed waiting time](#). When this option is active each calibration point is measured **x** minutes after the difference between the set temperature and the measured temperature is less than **y** °C. The values for **x** and **y** can be edited by the operator.
- The data measured during the calibration is now automatically saved in a RheoWin data file. The directory where the data is to be saved can be selected in the **Options > Save options** dialog.
- Several bugs were fixed.