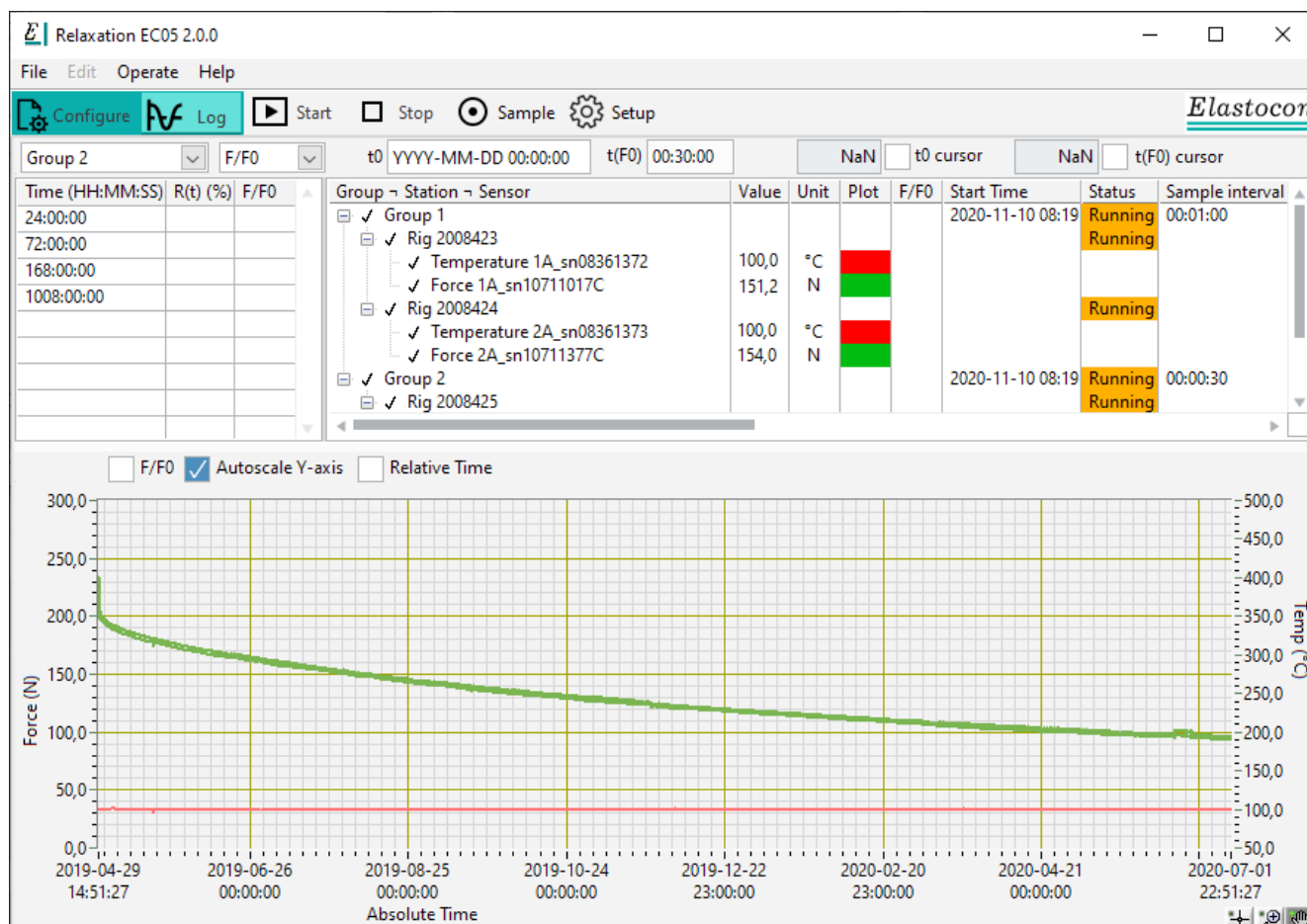


Elastocon®

Software for Relaxation Testing, EC 05



The application performs and evaluates stress relaxation tests and supports both ISO and ASTM standards.

The software is easy to use and is packed with features.

Features

- Edit the test setup and supervise test status.
- Evaluate stress relaxation.
- Automatically increase logging time interval.
- View result as absolute force in N, F/F0, R(t) or F/F(t0).
- Calculate of the median value when testing double or triple test pieces.
- Create test reports.
- Compensate for the load cell deformation.
- Switch between absolute or relative time.
- View result graph as linear or logarithmic time.
- Easily zero the force.
- Easily set F0.
- Set end condition as F/F0 or time.

Software for Relaxation Testing, EC 05

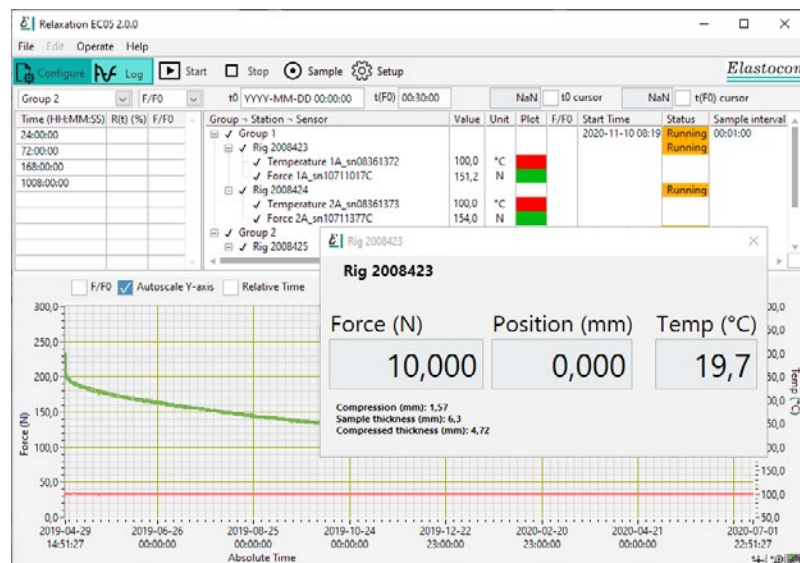
Configuration view

Hardware Configuration	Physical quantity	Interface	Resource	Channel	Simulate	Status
Rigg MK043_sn2001134	Temperature	WAGO	192.168.10.87	3	FALSE	Disconnected
Temperatur 3A_sn06460198	Force	WAGO	192.168.10.87	9	FALSE	Disconnected
Kraft 3A_sn021427C						
Rigg MK046_sn2006342	Temperature	WAGO	192.168.10.87	4	FALSE	Disconnected
Temperatur 4A_sn06460200	Force	WAGO	192.168.10.87	11	FALSE	Disconnected
Kraft 4A_sn0411072C						
Rigg MK047_sn2006343	Temperature	WAGO	192.168.10.87	13	FALSE	Disconnected
Temperatur 5A_sn06460199	Force	WAGO	192.168.10.87	17	FALSE	Disconnected
Kraft 5A_sn0509079C						
Rigg MK048_sn2006344	Temperature	WAGO	192.168.10.87	14	FALSE	Disconnected
Temperatur 6A_sn06460201	Force	WAGO	192.168.10.87	19	FALSE	Disconnected
Kraft 6A_sn10705151C						

User Configuration	Physical quantity	Interface	Resource	Channel	Simulate	Status
Group 1						
Rigg MK043_sn9970	Temperature	WAGO	192.168.10.87	1	FALSE	
Temperatur 1A_sn07060554	Force	WAGO	192.168.10.87	5	FALSE	
Kraft 1A_sn7098041C						
Rigg MK044_sn9971	Temperature	WAGO	192.168.10.87	2	FALSE	
Temperatur 2A_sn99091997	Force	WAGO	192.168.10.87	7	FALSE	
Kraft 2A_sn4005008C						
Group 2						
Rigg MK140_sn2017771	Temperature	WAGO	192.168.10.90	1	FALSE	
Temperatur 1B_sn16361117	Force	WAGO	192.168.10.90	5	FALSE	
Kraft 1A_sn110904696C						
Rigg MK141_sn2017772						

In the **Configuration view** the user can combine one, two or three rigs to a group. Data for the group is saved in one file. The software calculates the median results from the rigs in the group.

Log view



In the **Log view**, the user sets the logging details, the evaluation points – time for t_0 and F_0 , and starts the test.

Support Agreement

We offer an annual support agreement.

Included in the support agreement:

- Free e-mail and telephone support for both technical and testing issues.
- Free remote control support for problem solving and/or updates.
- Free software update during the validity time of the support agreement.

The support agreement should be renewed annually for continuous validity.

Group Setup

In the **Group Setup** window, the file name for the result file is specified, the logging intervals can be modified, and the end conditions are set as time, F/F_0 or a combination of both.

Station Setup

In the **Station Setup** window, the user sets the type of test (compression or tension) and the test piece dimensions.

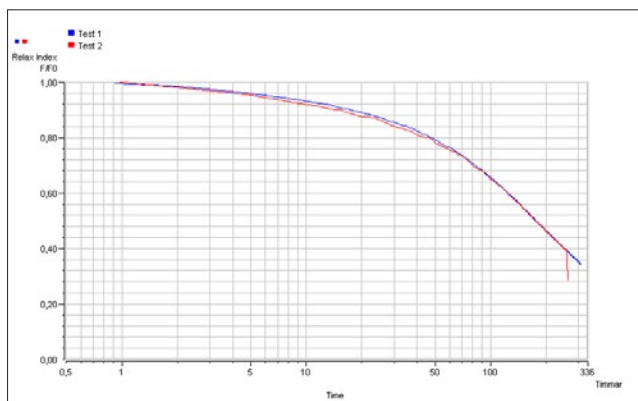
Evaluation points

Group 1		F/F0
Time (HH:MM)	R(t) (%)	F/F0
168:00	19	0,81
336:00	25	0,75
1008:00	35	0,65
2016:00	41	0,59

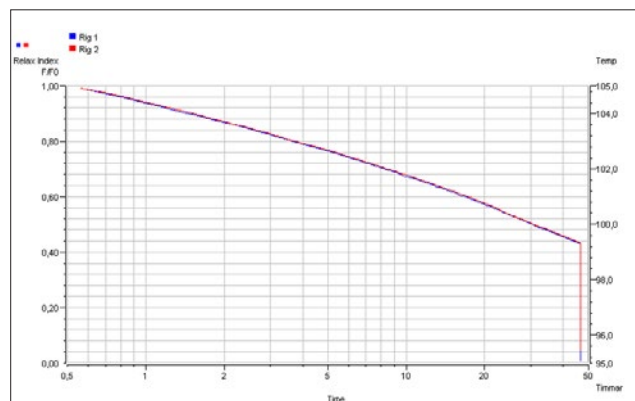
In the **Evaluation points** table, evaluation points can be specified, at which the application will calculate the relaxation percentage and F/F_0 .

Software for Relaxation Testing, EC 05

Examples of test results



The graph shows the repeatability of the relaxation rigs. This graph is from two tests of the same compound run at different times.



This is a graph from two samples of the same compound run at the same time in different rigs.

EC 05 Viewer

The Relaxation Viewer is a part of EC05 Relaxation, and this is where you analyze the test results and create test reports.

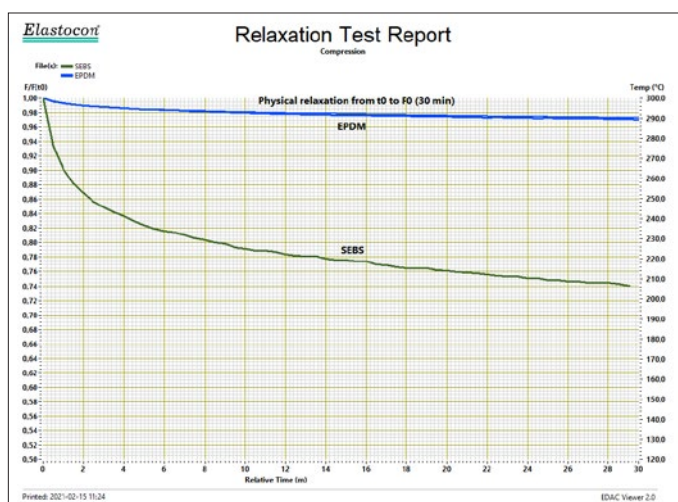
Additional Viewer licenses can be purchased so the Viewer can be installed on a separate computer. This allows a user to check and evaluate the tests from an office computer.

Features

- Open multiple files for comparison and analysis.
- Create reports for printing or export.
- Edit evaluation points.
- Analyze according to ISO3384 method B.
- Export measurement data.

Evaluation point editor (image below)

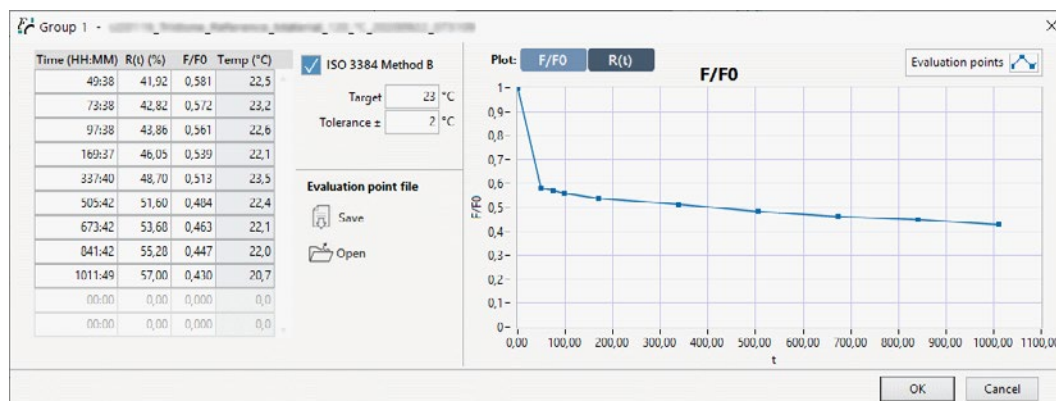
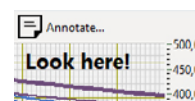
Add, remove and modify evaluation points. Evaluation can also be done by F/F_0 , $R(t)$ according to ISO 3384 method B, with cycling temperatures. Evaluation points can also be saved to file and loaded for other log files too.



This graph shows relaxation from t_0 till F_0 .

Add annotations

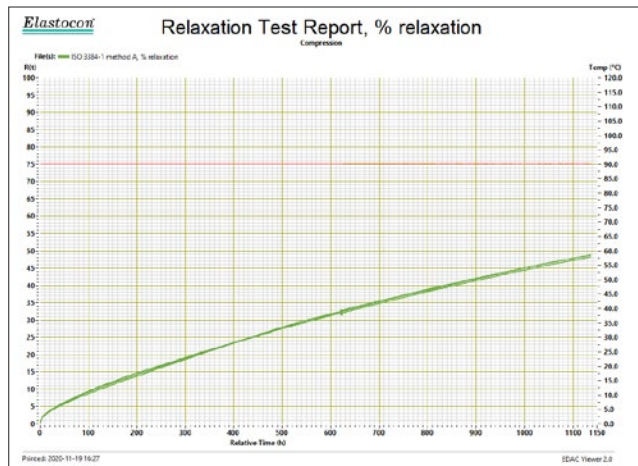
Annotations can be added to the graph. They appear on the report.



EC 05 Viewer

Display F/F_0 , $R(t)$ and $F/F(t_0)$ (image below)

Force can be displayed as F/F_0 , $R(t)$ or $F/F(t_0)$.
 $F/F(t_0)$ displays $F/F(t_0)$ between t_0 and F_0 .



The graph can show the result as F/F_0 or as % relaxation.

Create Reports (image below)



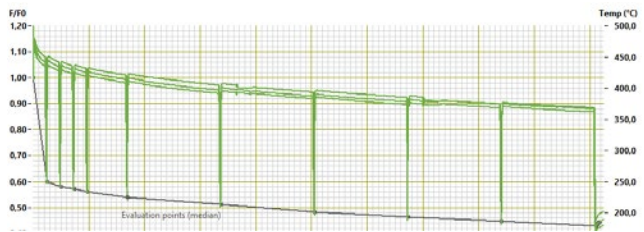
Two main types of reports are available, one that includes details about the included stations and evaluation point calculations, and one that is only a graph (see image on previous page).

Annotations can be added to the report, plot names can be displayed and modified, the plot appearance and graph scale setup can be edited. The graph time can be set to relative or absolute time, as well as logarithmic scale.

The report can be printed or saved as an image file.

Print evaluation data as plot (image below)

Evaluation points can be plotted in the report.



Pick and choose what to print

Multiple files, groups or stations can be selected (in any combination) for report printing.

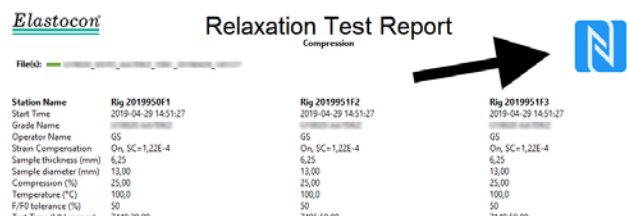
View log point details

Details for the log points can be browsed and relaxation levels can be searched for.

Relaxation (%)	Force (N)	F/F0	F/F(t0)	Relaxation (%)
12.0	87.93	0.879	9.063	12.1

Customize report (image below)

The report header and file names can be edited, and a logo can be added to the report.



Edit group and station settings

Grade name, operator and comment can be edited.

Turn off strain compensation

Strain compensation can be turned off or on per station or group.

Export data

Measurement data can be exported into a well formatted text file for import into e.g. Excel or database systems.

ELASTOCON reserve the right to modify these specifications in part or in whole.

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