YOUR PARTNER IN RHEOLOGY

The flow of matter is created by Force, Deformation and Time. The Symbol of Bohlin Instruments represents this infinite process as the three links of a chain, just as our quality, service and support are invaluable to materials testing. The competitive edge which Rheology offers industry is the driving force for Bohlin innovation. As more and more industrial applications demand the information which only rheology and rheological measurements can provide, Bohlin Instruments responds with the knowledge and experience to offer practical rheology solutions.

Bohlin Instruments' Rheology Support Package

Bohlin Instruments has direct sales and service facilities in the USA, the UK, Germany and France, as well as a global network of distributors. To ensure that customers get the most from their instrumentation, Bohlin offers rheometer and viscometer usage training, contract testing, consultancy, applications advice, seminars, application notes, service support and guaranteed response service contracts.

Rotational Rheometers
Capillary Rheometers
Viscometers

Contract Testing
Consultancy
Training

BOHLIN INSTRUMENTS

Bohlin Instruments Ltd
The Corinium Centre
Cirencester
Gloucestershire GL7 1YJ
England
Phone: +44 (0)1285 644407
Fax: +44 (0)1285 644314
e-mail: sales@bohlin.co.uk
Internet: www.bohlin.com

Bohlin Instruments GmbH
Wittumstrasse 10
Pforzheim
D-75181
Germany
Phone: +49 (0)7231 580360
Fax: +49 (0)7231 580 3629
e-mail: info@bohlin.de
Internet: www.bohlin.de

Bohlin Instruments France
Villantipolis No 7
473 route des Dolines
06560 Sophia Antipolis
France
Phone: +33 493 000 171
Fax: +33 493 000 868
e-mail: info@bohlin.fr
Internet: www.bohlin.fr

Bohlin Instruments Inc
Suite I
11 Harts Lane
East Brunswick NJ 08816
USA
Phone: +1 732 254 7742
Fax: +1 732 254 1577
e-mail: sales@bohlinusa.com
Internet: www.bohlinusa.com

BOHLIN INSTRUMENTS

BOHLIN ROTATIONAL SOFTWARE

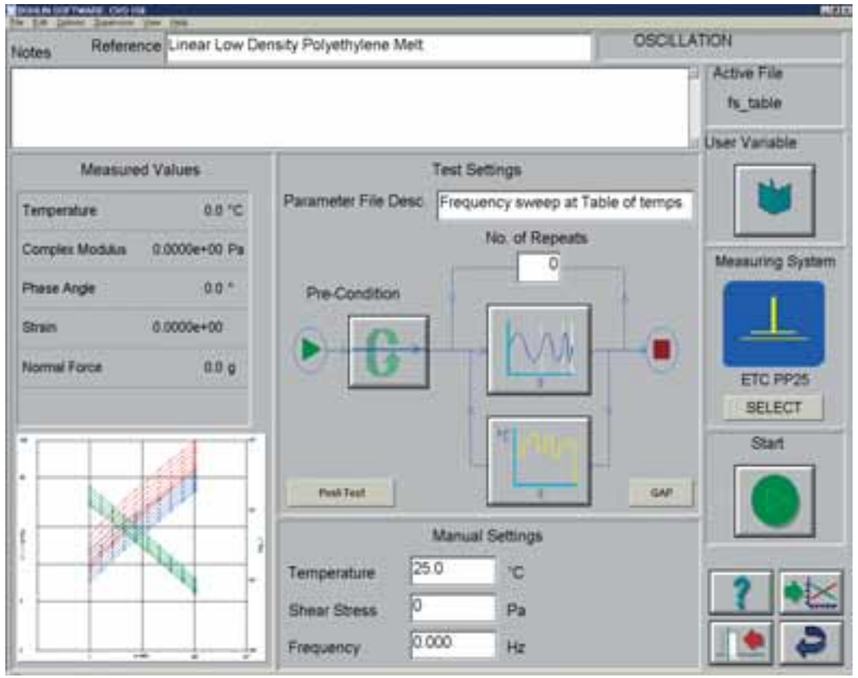
Bohlin Rotational software - innovative, user friendly and flexible

Bohlin rheometers are supplied with Windows™ based operating software which enables the instrument to be easily programmed for any test protocol. In keeping with Bohlin's tradition of developing advanced but easy to use software packages, the Bohlin software is equally suitable for advanced research or QC/QA use.

Key features of the Bohlin Windows system include:

- High speed data link quickly presents information and raw data on the screen in real time during complex measurement protocols.
- Extensive on-line help system with 'textbook' allows users to access help on all aspects of instrument usage, hardware selection and rheology theory.
- Multi lingual option for configuration of the software into local language variants.
- User defined variables enable a separate numerical field to be defined (e.g. pH) alongside the rheological data file.
- JobStream feature for linked test methods in sequence.
- Multiple user configurations enables the software to be individually configured for different users. Access can be controlled using a user password option.
- Unlimited length note editor for recording extensive sample and experimental details.
- Curve comparison function for retrieval and simultaneous presentation of an unlimited number of data sets.
- Integrated Time Temperature Superposition option with WLF and Arrhenius.
- Data point value determination on screen.
- Point editing/deletion.
- Fully flexible legend key for distinguishing variables or samples by defined colour and symbol.
- Full gap control allows the rheometer gap to be zeroed from the PC as well as programmed for closure, normal force control or thermal gap adjustment.
- Profile mode for temperature, shear stress or shear rate to simulate processes.
- Multiple sampling regions in creep, relaxation and stress growth testing give complete flexibility between linear and logarithmic modes for accurate zero shear viscosity determination.
- User defined tests can be programmed for easy retrieval and re-used for convenient repetitive testing.
- Model Fitting includes all commonly used linear and non-linear fits for rapid and easy correlation of experimental data to theoretical or empirical models.
- Integrated data processing allows rapid data analysis and numerical operations within the measuring program.
- Graphics 'zoom' for easy and convenient magnification of key data.
- SHRP test mode (asphalt samples only) for simple comparison of test samples against the SHRP pass/fail criterion. A grade determination test and SHRP linearity test is also available.
- Automatic print/plot facility.
- 'Autosave' of data at specified time intervals.
- Thixotropic loop and area analysis.
- Data file time stamp.
- Pass/fail criteria on model fit results for QC/QA .
- Data export as a user defined table to popular office applications such as Excel™ and other third party modules.
- Cut & paste facility for graphs or tables.

Note: A full specification detailing the most current Bohlin software is available upon request.



Operation Modes:

Viscometry Mode measures viscosity as a function of shear stress or shear rate. Shear rate sweep, shear stress sweep, time sweep (isothermal) and temperature sweep (gradient or step change) modes can all be programmed. Continuous ramp (yield stress) is also available.

Oscillation Mode measures the dynamic viscoelastic properties as a function of frequency. Frequency sweep, amplitude sweep, time sweep and temperature sweep (gradient or step change) modes can all be programmed. Frequency, time and temperature sweeps can be programmed at user defined strain or stress. Partial wave analysis available.

Creep Mode measures the creep compliance and recoverable compliance as well as the zero shear viscosity. Retardation spectra can be computed from creep test data.

Relaxation Mode* measures the relaxation modulus as a function of time following a step change in strain to compute the relaxation spectrum. The zero shear viscosity can also be computed from the relaxation test data.

Stress Growth* measures the transient shear stress during a steady ramp in strain at low shear rate - the Stress Growth Function. The zero shear viscosity and the relaxation spectrum can be computed from the stress transient. At cessation of shearing, the stress relaxation can be measured directly.

**** These operation modes are only available on digital rheometer drives***