



Individual. Intuitive. Intelligent.
Discover the difference.

Thermo
SCIENTIFIC

Discover the individual, intuitive and intelligent rheometer.

Development of the next generation Viscotester is driven by the demands of new rheological tasks in quality control. We combine decades of experience in rheology with solutions designed for highly dynamic working environments. Our goal is to enable fast, reliable and precise rheological measurements with maximum ease of operation.

The result is the Thermo Scientific™ HAAKE™ Viscotester™ iQ, THE rheometer for quality control. This instrument sets new standards in modularity, ease of use and intelligent guidance to users.

The Viscotester iQ rheometer is the instrument of choice for acquiring simple viscosity curves, or for complex rheological investigations covering measurements of low viscous liquids up to highly viscous pastes. Used as a standalone unit, or controlled by software, its size and footprint make the Viscotester iQ a portable unit for mobile use, or as an important tool in the quality control laboratory.

What is your rheological challenge? The Viscotester iQ provides you with the intelligent solution.



One instrument, multiple rheological tasks: the HAAKE Viscotester iQ is ready for use in seconds in any configuration you need

Quick bayonet mountings for short pre- and post handling time per measurement

Intuitive.

The rheometer that makes QC more convenient for you.

- Breakthrough concept self-explaining in setup and handling
- Smart lift function for convenient, accurate and reproducible gap setting
- Measuring geometries designed for optimized handling and easy exchange
- Correct and precise sample filling for parallel plates



USB memory stick for job and data transfer between instrument and PC



Individual.

The rheometer that meets your demands in QC.

- Sophisticated design for easy exchange between different measuring configurations
- Highly dynamic, powerful EC motor for enhanced measuring flexibility
- Exchangeable self-contained Peltier or liquid controlled temperature modules
- Broad scope of measuring geometries
- Multiple ways of operation as standalone unit, with HAAKE™ Viscotester™ iQ RheoApp™ or fully software controlled

Measuring geometry with Connect Assist



Intelligent.

The rheometer that guides you through your measurement challenges.

- Touch screen display for visualization of numerical and graphical measurement results
- Intelligent user guidance for measuring and evaluation procedures, selection of suitable jobs with indication of available measuring range
- "Connect Assist" quick coupling of measuring geometries and temperature modules with perfect alignment, automatic recognition and feedback for measuring optimization
- "Temperature Assist" rapid real sample temperature control based on a dynamic heat transfer model

Simple or advanced measurements?

It's your choice...

Choose between standalone or software controlled operation.

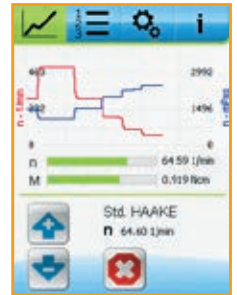
The HAAKE Viscotester iQ is the instrument of choice for single point measurements, standardized job routines and extensive rheological measurements in quality control.

Optimize operation to the individual requirements of each user: from novice technicians to expert rheologists.



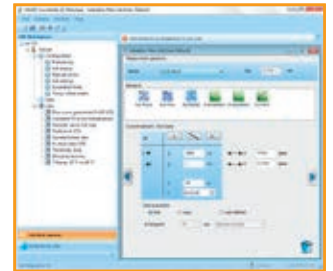
Standalone instrument with internal measurement routines

- Multilingual touch screen display
- Manual operation or predefined measurement routines
- Comprehensive data evaluation (e.g., interpolation, curve-fitting, thixotropy index)
- Graphical or numerical real time display of measured data
- Integrated user management system
- Individual user interface settings
- Optional USB keyboard (wireless possible) or bar-code reader



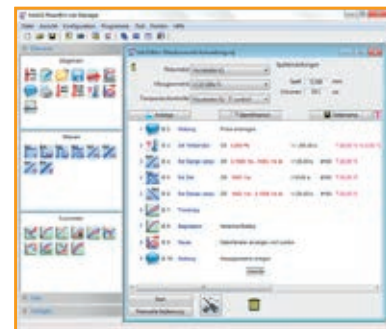
HAAKE Viscotester iQ RheoApp: PC software for advanced job and configuration editing

- Runs directly from the USB flash drive, no installation needed
- USB flash drive for transfer of jobs, configuration settings and measured data between rheometer and PC
- Comfortable configuration of the HAAKE Viscotester iQ user interface settings and user management system
- Display and storage of measured data



HAAKE RheoWin software for highest measuring flexibility

- Multilingual user interface
- Convenient creation of fully automated jobs including messages for user guidance, data analysis and documentation
- Export of data (ASCII, MS-Excel R, XML, etc.)
- Data transfer to information and laboratory systems (ERP, LIMS, etc.)
- Reports, graphs and tables saved in a wide variety of formats (e.g., pdf, jpg,)
- Numerous algorithms for data analysis
- Loop programming with break-up criteria
- FDA 21 CFR Part 11 compliance (optional software tool)



...for your application

Food

Typical samples

- Chocolate
- Dairy products
- Spreads
- Dips and sauces

Recommended measuring routines

- Viscosity curve
- Yield stress and thixotropy measurements
- Structural breakdown and recovery test

Material properties

- Flow behavior
- Processability
- Pumpability
- Mixing behavior
- Mouthfeeling
- Stability (shelf life)
- Spreadability



Cosmetics & Pharmaceuticals

Typical samples

- Creams and lotions
- Shampoos
- Shower gels
- Ointments
- Hair colorants

Recommended measuring routines

- Viscosity curve
- Yield stress and thixotropy measurements
- Structural breakdown and recovery test
- Temperature depending tests

Material properties

- Flow behavior
- Processability
- Pumpability
- Mixing behavior
- Applicability
- Stability (shelf life)
- Spreadability



Paints, Inks & Coatings

Typical samples

- Wall paint
- Automotive coatings
- Printing inks and pastes

Recommended measuring routines

- Viscosity curve
- Yield stress and thixotropy measurements
- Structural breakdown and recovery test

Material properties

- Flow behavior
- Processability
- Pumpability
- Printability
- Sprayability
- Levelling behavior
- Sedimentation



Mining & Construction

Typical samples

- Mineral slurries
- Ceramic suspensions
- Construction materials
- Mortars and grouts

Recommended measuring routines

- Relative viscosity determination
- Yield stress measurements
- Time depending hardening / drying

Material properties

- Flow behavior
- Processability and Processing time
- Pumpability



Petrochemicals

Typical samples

- Crude oils
- Greases and lubricants

Recommended measuring routines

- Viscosity curve
- Yield stress and thixotropy measurements
- Temperature depending tests

Material properties

- (Temperature depending) flow behavior
- Pumpability



Polymers

Typical samples

- Polymer solutions
- Stabilizer and thickening agents
- Glues and adhesives
- Resins

Recommended measuring routines

- Viscosity curve
- Yield stress and thixotropy measurements

Material properties

- Flow behavior
- Processability and Processing time
- Cure and pot time



Diverse measuring demands?

Select from the broad accessory

A broad range of measuring geometries guarantees a high level of flexibility in a wide viscosity range.

- **Coaxial cylinders and parallel plates** of various materials, in multiple sizes and with different surfaces
- **Variety of lower plates** for matching the upper plate in diameter and appearance ensures ideal measuring conditions and optimal sample filling
- **Disposable geometries** e.g., for hardening materials
- **Double gap cylinder** geometry for measuring low viscosities
- **Vane rotors** for relative measurements on highly filled or inhomogeneous samples with large particles as well as for measurements in original containers
- **Immersion tube** with coaxial cylinders for measurements directly in the production field
- **Sample hood** for preventing heat loss and solvent evaporation as well as minimizing the temperature gradient within the sample
- **Customized measuring geometries** available on request

Universal plug-and-play temperature modules are available as Peltier or liquid controlled versions.

A compact and robust design enables a fast, reliable and accurate temperature control.

- Small dimensioned coaxial cylinders for less sample volume and shorter temperature times to minimized costs per measurement
- Switching between coaxial cylinders and parallel plates is a matter of seconds
- Optimal material selection guarantees fast temperature equilibration and enables rapid temperature changes



Selection of accessories for measurements with coaxial cylinders and parallel plates including the universal sample hood



Immersion tube for coaxial cylinders



Universal container holder for relative measurements in the original container

portfolio.

Self-contained universal Peltier temperature module for coaxial cylinders and parallel plates



Transport case for complete setup



Technical data

Angular velocity	0.001 rad/s – 157 rad/s
Angular resolution	1.25 μ rad
Torque range	0.2 mNm – 100 mNm
Torque resolution	0.01 mNm
Shear stress range*	0.7 – 63660 Pa
Shear rate range*	0.004 – 11415 s ⁻¹
Viscosity range*	0.001 – 600000 Pa s
Measuring geometries	coaxial cylinders, double gap cylinder, parallel plates, vane rotors
Temperature range:	
TM-PE-C (Peltier)	Coaxial cylinders: -5 °C** up to 160 °C Parallel plates: 0 °C** up to 140 °C
TM-LI-C (Liquid)	Coaxial cylinders: -20 °C up to 180 °C Parallel plates: -10 °C up to 160 °C
Interfaces:	
TCP/IP	for communication with PC
USB	1 port for USB flash drive for HAAKE Viscotester iQ RheoApp 1 port for keyboard or barcode reader
Dimensions (W x D x H)****	270 mm x 500 mm x 500 mm
Weight****	18 kg
Autoswitch power supply	100 – 240 VAC, 50 / 60 Hz
Patents:	
Quick coupling	DE102012018592
Design	Europe 001320964 Japan 1471355 China ZL201230476257.6

* Depending on the measuring geometry used. Calculated theoretical values.

** Depending on ambient temperature.

*** Depending on the circulator model and the bath liquid.

**** HAAKE Viscotester iQ incl. Peltier temperature module, heat exchanger and measuring geometry.





Customer Services

We are committed to customer support, including specific service products, short response times, and customer-specific solutions. To quickly and flexibly meet our customer's requirements, we offer a comprehensive range of services.

Application Laboratories and Support

Our fully equipped laboratories reflect our application expertise and commitment to innovation. Our laboratories are in constant demand for testing customer samples and developing and optimizing pioneering applications. We also provide a broad range of product and application solutions and our application specialist team is on hand to answer your questions.

Trainings Courses, Seminars and Webinars

We offer our customers a comprehensive training program and selected courses in our international training center in Karlsruhe, Germany. Basic and advanced rheology seminars and training on special applications are held worldwide. In-house seminars are also offered to our customers. Webinars on a regular base extend our training program.

Comprehensive Knowledge Base

We offer a wide range of literature to help you enhance your knowledge on rheology as well on applications solutions that help you in your daily work. Selected product information and application notes:

- V 267 The Rheological Behaviour of Shower Gel –
What makes a product acceptable for a specific target customer?
- V 268 Spreadability of Cream Cheese –
Influence of Temperature and Fat Content
- V 269 Flow Behaviour of Chocolate Melts –
Working according to ICA Standards
- P047 Universal container holder
- P048 Transport case

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