



# Thermo Scientific HAAKE Viscotester iQ Rheometer Series

Individual. Intuitive. Intelligent.  
Discover the difference.

# Discover the individual, intuitive and intelligent rheometer series

Continuous improvement of the next generation Viscotester is driven by the demands of new rheological tasks in quality control.

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 Rheometer series with two models: HAAKE Viscotester iQ and HAAKE Viscotester iQ Air Rheometer. This rheometer series sets extraordinary standards in modularity, ease of use and intelligent guidance to users.

The HAAKE Viscotester iQ Rheometers are the Quality Control instruments of choice for acquiring simple viscosity curves, as well as for more complex rheological investigations in rotation or oscillation. Used as a standalone unit, or controlled by software, its size and footprint make the HAAKE Viscotester iQ Rheometer a portable unit for mobile use, or as an important tool in the quality control laboratory.

**What is your rheological challenge?**

**The HAAKE Viscotester iQ Rheometer provides you with the intelligent solution.**

One rheometer series,  
multiple rheological tasks:  
the HAAKE Viscotester iQ  
Rheometers are ready for use  
in seconds in any configuration  
you need



# HAAKE Viscotester iQ



## Intuitive.

The rheometers that make QC more convenient for you.

- Breakthrough concept – self-explaining 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 as well as cone and plate geometries

## Individual.

The rheometers that meet your demands in QC.

- Sensitive air-bearing or ultra robust ball-bearing model
- Sophisticated design for easy exchange between different measuring configurations
- Exchangeable self-contained Peltier or liquid controlled temperature modules
- Broad scope of measuring geometries
- Multiple ways of operation – standalone, with RheoApp or fully software controlled

## Intelligent.

The rheometers that guide you through your measurement challenges.

- Highly dynamic, powerful EC motor for enhanced measuring flexibility in rotation and oscillation mode
- Touch screen display for visualization of numerical and graphical measurement results
- User guidance for measuring and evaluation procedures with online data range assessment
- “Connect Assist” technology – quick coupling and automatic recognition of measuring geometries and temperature modules



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



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



Measuring geometry with “Connect Assist” technology



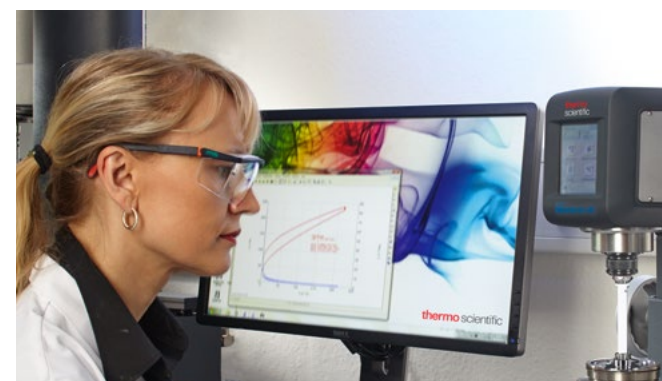
# Simple or advanced measurements?

You have the choice!

## Choose between standalone, App supported or software controlled operation

The HAAKE Viscotester iQ Rheometers are the instruments 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 or bar-code reader

### Thermo Scientific™ HAAKE™ Viscotester iQ RheoApp™ PC Software for advanced job and configuration editing

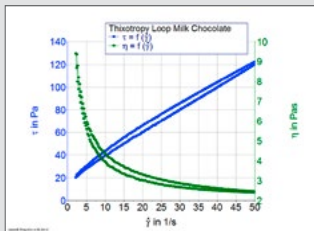
- Runs directly from the USB flash drive, no installation needed
- USB flash drive for transfer of jobs, configuration settings and measured data between rheometer and PC
- Convenient configuration of the HAAKE Viscotester iQ Rheometer user interface settings and user management system
- Display and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

### Thermo Scientific™ 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, Microsoft® Excel®, XML, etc.)
- Data transfer to information and laboratory systems (ERP, LIMS, etc.)
- Reports, graphs and tables saved in a wide variety of formats (pdf, jpg, etc.)
- Numerous algorithms for data analysis
- Loop programming with break-up criteria
- FDA 21 CFR Part 11 compliance (optional software tool)

# Determine the relevant rheological parameter...

## Viscosity measurements or extended material characterization?

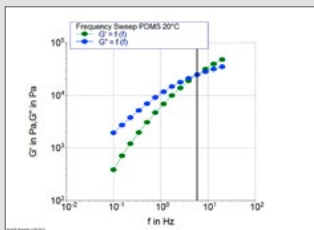


### Investigation of Viscosity and Thixotropy

Viscosity determination and investigation of shear rate dependent behavior for low viscous fluids up to pastes, at constant temperature or over a wide temperature range

#### HAAKE Viscotester iQ Air Rheometer:

- Go to lower shear rates
- Measure even water like sample



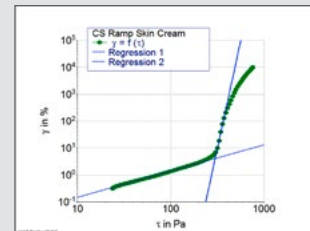
### Measuring viscoelastic Properties

Investigation of the viscoelastic behavior for structured fluids as simple QC method:

- Performing non-destructive measurements
- Determination of the linear viscoelastic range (LVR)
- Automatic calculation of the crossover-point ( $G' = G''$ )

#### HAAKE Viscotester iQ Air Rheometer:

- Investigate softer viscoelastic structures

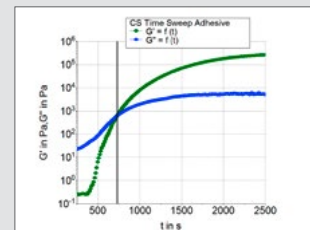


### Determination of Yield Stresses

Precise yield stress determination in Controlled Stress (CS) mode even for delicate samples with a yield stress starting from 10 Pa, e.g. cosmetic lotion

#### HAAKE Viscotester iQ Air Rheometer:

- Test more delicate structures
- Measure lower yield stresses



### Tracing Phase Transitions

Investigation of time- or temperature dependent structural changes like cross-linking, curing or crystallization for certain materials and applications

#### HAAKE Viscotester iQ Air Rheometer:

- Measure phase transitions from water like to solid

Learn more:

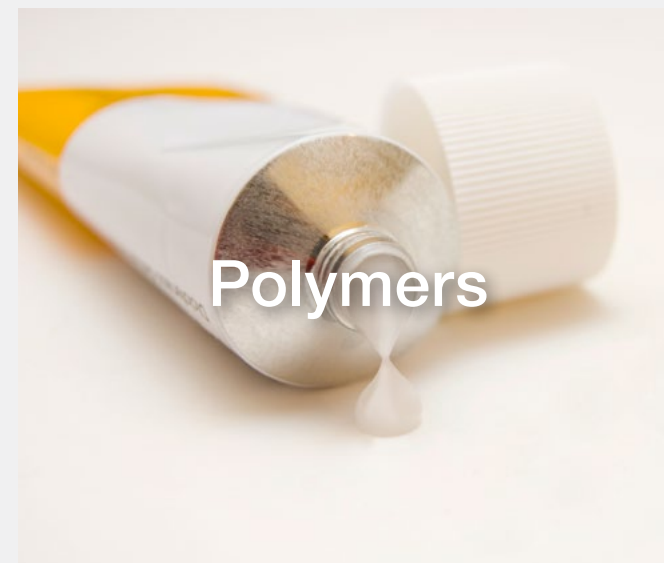
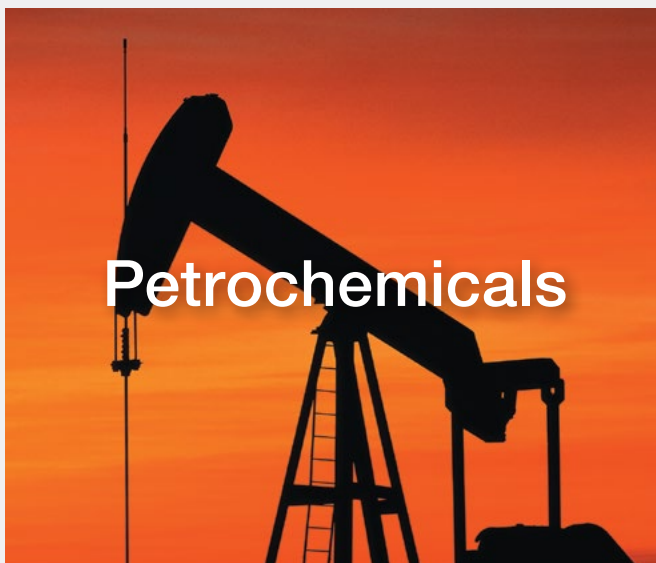
HAAKE Viscotester iQ Air Rheometer for waterlike samples



Measuring viscoelastic properties



# ...for your application





# Diverse measuring demands?

Select from a broad accessory portfolio



# Accessories for special applications



## High temperature/high pressure tests

- Dedicated HAAKE Viscotester iQ Rheometer configuration for pressure cells
- Comprehensive pressure cell portfolio for tests up to 600 bar and 300 °C. Made of titanium or Hastelloy®. Coaxial cylinder, double gap and vane rotors can be used



## Simple measurements even on difficult samples!

- Measuring cell with **exchangeable lamella profiles** to prevent wall-slip
- For relative measurements on highly filled or **inhomogenous samples**



## Stay mobile and flexible!

- **Measurements wherever you want** bring the rheometer on site with the tailormade robust transport case
- **Easily customize** measurements setups using a single measuring head



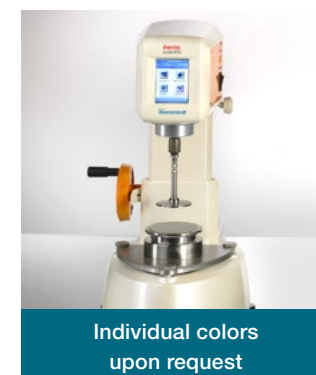
## Entry-level configuration with expansion potential

- RheoApp for **convenient standalone** operation
- Immersion tube with DIN cylinder for **absolute measurements**
- **Temperature control** with refrigerated circulator and double walled sample cup



# Choose the optimal configuration for your needs

Click on the application that you are interested in:



Technical data	HAAKE Viscotester iQ	HAAKE Viscotester iQ Air
Bearing type:	Ball Bearing	Air-Bearing
Measuring modes:		
In rotation	Controlled Rate (CR), Controlled Stress (CS)	
In oscillation <sup>a</sup>	Controlled Deformation (CD), Controlled Stress (CS)	
Angular velocity range	0.001 rad/s – 157 rad/s	
	0.01 rpm – 1500 rpm	
Angular resolution	1.25 $\mu$ rad	
Torque range	0.2 mNm – 100 mNm	0.01 mNm – 100 mNm
Torque resolution	0.01 mNm	0.001 mNm
Shear stress range <sup>b</sup>	0.7 Pa – 63660 Pa	0.04 Pa – 63660 Pa
Shear rate range <sup>b</sup>	0.004 s <sup>-1</sup> – 11415 s <sup>-1</sup>	
Frequency range	0.1 Hz – 20 Hz <sup>a</sup>	0.1 Hz – 50 Hz
Minimum deflection angle <sup>a</sup>	10 $\mu$ rad	
Viscosity range:		
In rotation <sup>b</sup>	0.001 Pa s – 600000 Pa s	
In oscillation	5 Pa s and higher <sup>a</sup>	0.03 Pa s and higher
Measuring geometries	Coaxial cylinders, double-gap cylinders, parallel plates, cones, vane rotors	
Temperature range:		
Universal Peltier controlled Module (TM-PE-C)	Coaxial cylinders: -5 °C <sup>c</sup> up to 160 °C, Plates and cones: 0 °C <sup>c</sup> up to 140 °C	
Universal Liquid controlled Module (TM-LI-C32 / – C48)	Coaxial cylinders: -20 °C up to 180 °C <sup>d</sup> , Plates and cones: -10 °C up to 160 °C <sup>d</sup>	
Peltier controlled Plate (TM-PE-P)	0 °C <sup>c</sup> up to 160 °C	
Liquid controlled Plate (TM-LI-P)	-20 °C up to 180 °C <sup>d</sup>	
Electrically controlled Cylinder (TM-EL-C) <sup>e</sup>	up to 300 °C	
Interfaces:		
TCP/IP-Ethernet	for communication with PC	
USB	1 port for HAAKE Viscotester iQ Rheo flash drive, 2 ports for keyboard or barcode reader	
Dimensions (W x D x H) <sup>f</sup>	270 mm x 500 mm x 500 mm	
Weight <sup>f</sup>	18 kg	
Autoswitch power supply	100 – 240 VAC, 50 / 60 Hz	

<sup>a</sup> HAAKE Viscotester iQ: option. HAAKE Viscotester iQ Air: standard content of delivery.

<sup>b</sup> Depending on the measuring geometry used. Calculated theoretical values.

<sup>c</sup> Depending on ambient temperature.

<sup>d</sup> Depending on the circulator model and the bath liquid.

<sup>e</sup> Available for pressure cell configuration.

<sup>f</sup> HAAKE Viscotester iQ Rheometer incl. Peltier temperature module, heat exchanger and measuring geometry.

# Benefit from global application support



With decades of application know-how in our worldwide demonstration labs, we can assist you in realizing your specific application needs and goals. Talk to our experts today and learn what options are available.

Experience our HAAKE Viscotester iQ Rheometer close in one of our demo labs, as an online demonstration or at your site. Discuss with us the best option for you.

## Discover more rheological solutions to serve your needs

HAAKE Viscotester 3  
Handheld viscometer



HAAKE Viscotester iQ / iQ Air  
Portable rheometer  
for flexible QC tasks



HAAKE MARS™ iQ / iQ Air  
Intuitive rheometer  
for flexible QC requirements



HAAKE MARS 40/60  
Rheometer for advanced  
QC and applied R&D



Selection guide for  
Thermo Scientific  
HAAKE Viscometers and  
Rheometers online:

www

Learn more at [thermofisher.com/rheometer](https://thermofisher.com/rheometer)

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