



Thermo Scientific HAAKE MARS iQ Rheometer Series

More iQ for your QC

A smarter rheometer system for quality control

The Thermo Scientific™ HAAKE™ MARS™ iQ Rheometer Series provides extensive flexibility and ease-of-use for daily quality control requirements.

HAAKE MARS iQ Rheometers enable fast, consistent characterization of a wide range of samples, regardless of user. The software and a user-friendly touch screen offer the possibility to support your employees with standard operating procedures including work instructions with images.

These intuitive, intelligent rheometers help confirm that the correct measuring geometry is selected via “Connect Assist” functionality for failure-free measurements. The robust rheometers employ modularity and a wide range of accessories to provide QC labs with both flexibility and speed. Quick connections allow fast configuration changes for many different analyses.

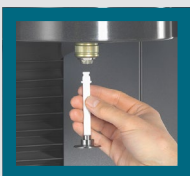
The HAAKE MARS iQ Rheometer comes in two different versions, equipped with either ball-bearing or air-bearing. It provides a wide measuring range for a variety of samples and extended testing capabilities including texture analysis, tribology, and pressure-dependent tests.

When developing the HAAKE MARS iQ Rheometer Series, we combined the requirements for a high-precision rheometer with eco-friendly materials, low energy consumption, and resource-efficient manufacturing processes.



HAAKE MARS iQ Rheometer Series – intuitive, intelligent and individualized systems that deliver more iQ for your QC.

Benefits at a glance



Intuitive.

A QC rheometer that makes QC even more convenient

- State-of-the-art user interface for SOP execution
- “Assist” functionalities to ensure safe and correct measurements



Intelligent.

A QC rheometer design that masters daily measurement challenges

- Unique lift and frame concept to meet highest technical requirements with free access to sample area
- Next generation of EC motor ideal for different demands
- CO₂ reduction in harmony with the environment



Individualized.

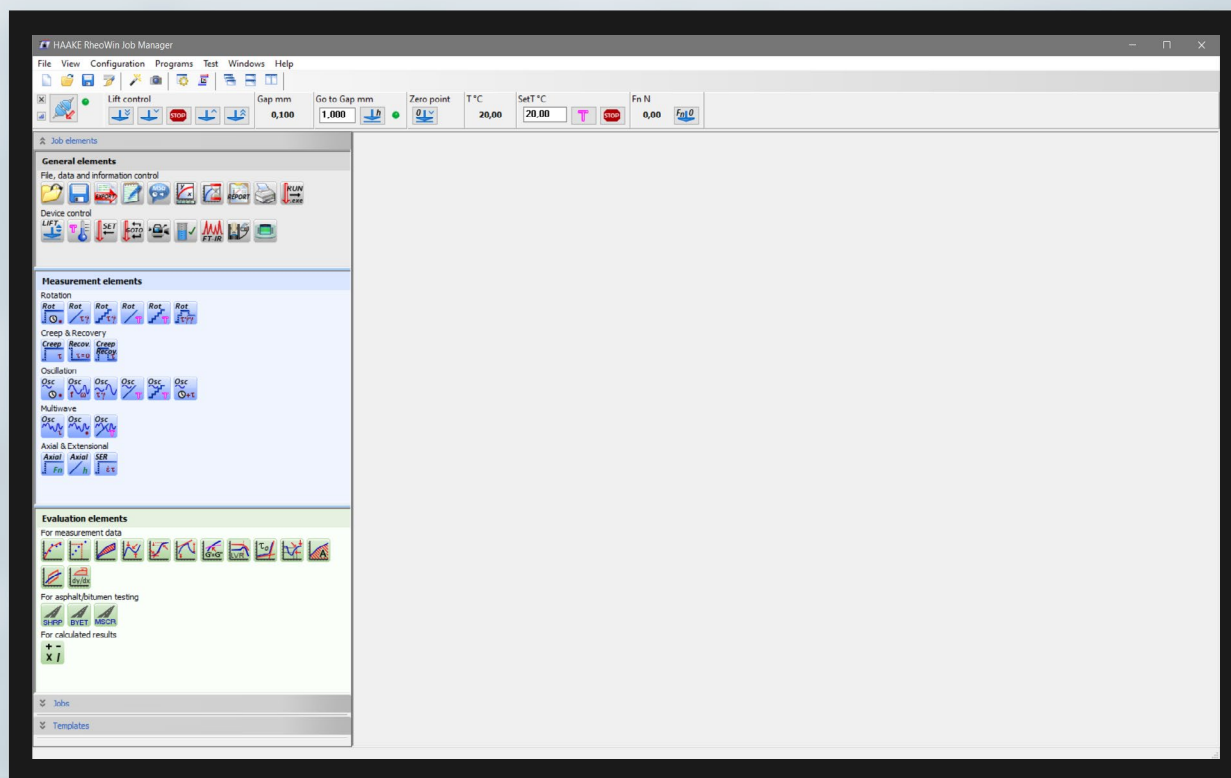
A QC rheometer with extraordinary flexibility for tomorrow's testing demands

- Future-proof with extensive and growing accessory portfolio
- Ready for measurements beyond rheology using normal force capabilities



Operation with a mouse-click ...

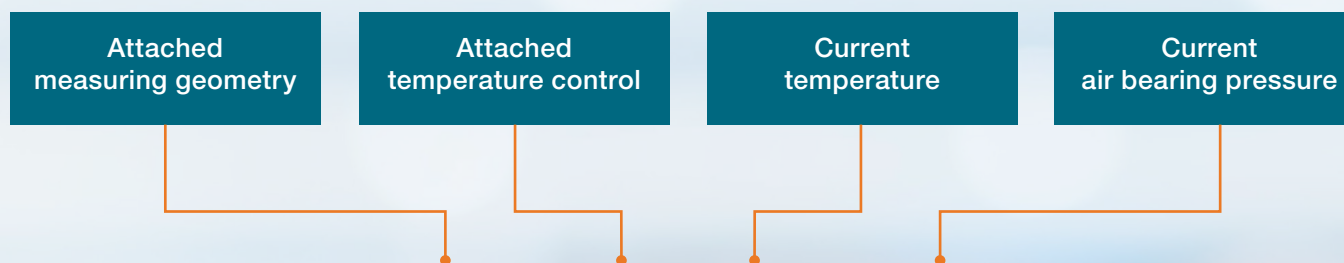
HAAKE MARS iQ Rheometers are fully software controlled via HAAKE RheoWin™ PC Software which allows operations to be optimized for individual requirements




... or operation with a finger touch

Instrument touchscreen user interface for more convenience

- Large 7" color touchscreen (multilingual)
- Manual lift control for zero gap determination, sample loading, sample trimming and geometry exchange
- Launch of any HAAKE RheoWin Software method directly from the instrument
- Real-time display of basic numerical measurement data
- Display of basic data analysis results
- Standby mode for energy savings



Press the display icons to see different screens and press the home button  to return to the main screen

HAAKE MARS iQ or HAAKE MARS iQ Air Rheometer?

Choose between a robust and self-contained ball bearing or a sensitive air bearing model



	HAAKE MARS iQ	HAAKE MARS iQ Air	
Rotation mode (Controlled Rate or Controlled Stress)	✓	✓	Methods
Yield point determination	✓	✓	
Creep and recovery	✗	✓	
Oscillation mode (Controlled Strain or Controlled Stress)	✓	✓	
Squeeze, break and penetration tests	✓*	✓	Accessories
Tribological measurements	✓*	✓	
Dynamic Mechanical Thermal Analysis	✗	✓	
Extensional rheology (on polymer films)	✗	✓	
Pressure dependent tests up to 600 bar	✓	✓	Samples
Low viscous fluids (e.g., beverages, low concentrate solutions, spray paints)	✗	✓	
Medium to high viscous fluids (e.g., slurries, bitumen, concentrated solutions)	✓	✓	
Semisolids (e.g., construction materials, emulsions, pastes)	✓	✓	
Solids (e.g., thermo plastics, thermo sets, composites)	✗	✓	

*Option Normal force required

For further testing methods (e.g., interfacial rheology) or for measurements beyond pure rheology with hyphenated methods please see [HAAKE MARS 40 and 60 Rheometer](#)

A smart choice for your application

Choose the optimal configuration for your needs

With its modular design and broad accessory portfolio, the HAAKE MARS iQ Rheometer can be quickly adapted to perform rheological tests of samples ranging from water-like to semisolid.

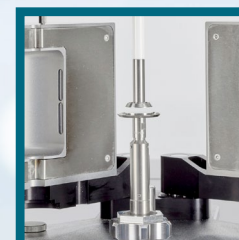


Click on the icons
to learn more

Discover the temperature chamber with extended measuring capabilities over the widest temperature range

- Widest available temperature range between -150 °C* and +450 °C
- Changing the rheometer configuration between temperature chamber and other temperature module within 1 minute without additional tools or alignment
- “View Assist” – Camera option for sample observation during tests
- Maximum opening angle half-shells: >90 ° for convenient sample handling
- Push and Pull functionality for convenient sample loading of DMTA bars
- Broad selection of measuring geometries

*Lowest temperature depends on cooling principle:
 With compressed air: down to RT,
 with cold gas chiller: -60 °C,
 with liquid nitrogen: -150 °C



Parallel plates /
cone and plate



Solids clamping
fixture (rectangular
specimen)



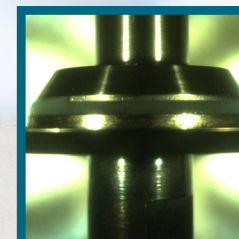
Solids clamping
fixture (cylindrical
specimen)



Tribology



Sentmanat
Extensional
Rheometer (SER) tool



Camera
option

Technical data		Units	HAAKE MARS iQ	HAAKE MARS iQ Air
Bearing type			Ball Bearing	Air Bearing
Measuring modes:				
Rotation (CR ^a , CS ^b)			✓	✓
Oscillation (CD ^c , CS)			✓	✓
Torque range:				
Min. torque rotation	mNm	0.2	0.001	0.001
Max. torque rotation	mNm	125	150	150
Min. torque oscillation	mNm	0.2	0.001	0.001
Max. torque oscillation	mNm	125	150	150
Torque resolution	µNm	2.0	0.007	0.007
Velocity ranges:				
Min. angular velocity	rad/s	0.001	0.0001	0.0001
Max. angular velocity	rad/s	209.4	209.4	209.4
Min. rotation speed	rpm	0.01	0.001	0.001
Max. rotation speed	rpm	2000	2000	2000
Angular resolution	µrad	0.63	0.63	0.63
Frequency range:				
Min. frequency	Hz	0.01	0.0001	0.0001
Max. frequency	Hz	20	100	100
Normal force:				
Min. normal force	N	0.01 ^d	0.01	0.01
Max. normal force	N	50 ^d	50	50
Normal force resolution	N	0.001 ^d	0.001	0.001
Lift performance:				
Max. lift travel	mm	230	230	230
Gap accuracy	µm	1	1	1
Gap resolution	µm	0.05	0.05	0.05
Min. lift speed	µm/s	0.05	0.05	0.05
Max. lift speed	mm/s	20	20	20
Temperature modules with automatic recognition				
Features and functionalities:				
Color Touch Screen			✓	✓
Connect Assist			✓	✓
Protect Assist			✓ ^d	✓ ^d
Color Assist			✓	✓
View Assist			✓ ^d	✓ ^d
Interfaces:				
TCP/IP-Ethernet			For communication with PC	For communication with PC
Dimensions:				
W x D x H	mm	480 x 390 x 670	480 x 390 x 670	480 x 390 x 670
Weight	kg	57	57	57

^a Controlled Rate, ^b Controlled Stress, ^c Controlled Deformation, ^d Option, ^e Depending on cooling option, ^f Depending on circulator performance and cooling media,

^g When using suitable measuring geometries, ^h In combination with active hood, ⁱ Depending on ambient temperature

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 MARS iQ Rheometer from up 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
Compact 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:



Learn more at thermofisher.com/rheometer

thermo scientific