



# 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.

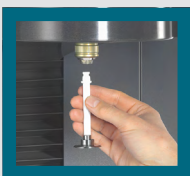
The HAAKE MARS iQ Rheometer comes in two different versions, equipped with either ball-bearing or air-bearing. It provides a wide measuring range for a variety of samples and extended testing capabilities including texture analysis, tribology, and pressure-dependent tests.

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
- CO<sub>2</sub> reduction in harmony with the environment



## Individualized.

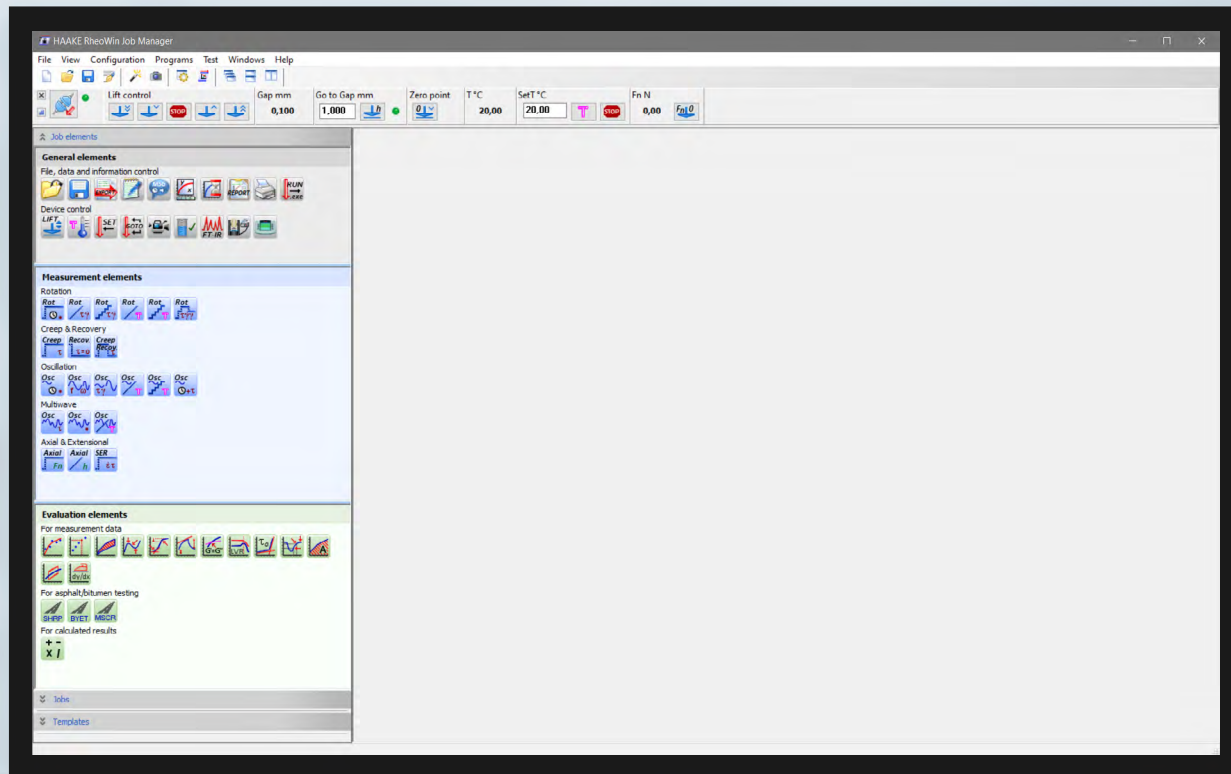
### A QC rheometer with extraordinary flexibility for tomorrow's testing demands

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



# Operation with a mouse-click ...

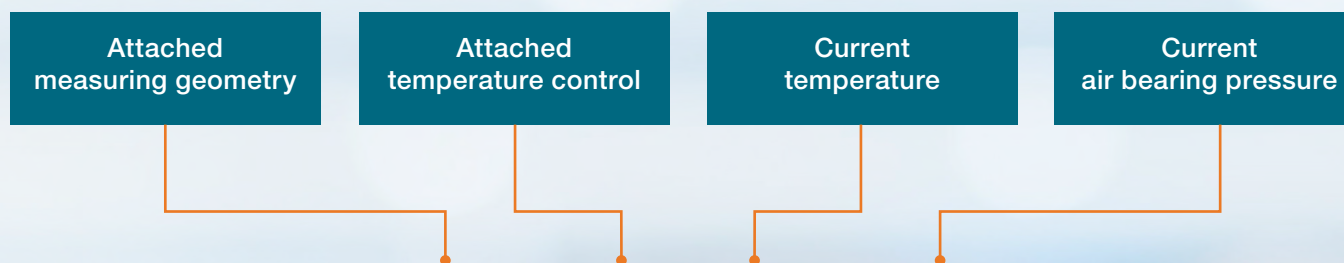
HAAKE MARS iQ Rheometers are fully software controlled via HAAKE RheoWin™ PC Software which allows operations to be optimized for individual requirements




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

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

<sup>g</sup> When using suitable measuring geometries, <sup>h</sup> In combination with active hood, <sup>i</sup> 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](https://thermofisher.com/rheometer)

thermo scientific