

Thermo Scientific

# **HAAKE Viscotester iQ**

## **Instruction Manual**

Addendum for Instrument Head Only

(Original instructions)

006-4523    Version 3.4    January 2025

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Release history:

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## Preface

This manual is an addendum to the Thermo Scientific™ HAAKE™ Viscotester™ iQ Instruction Manual and *only* describes the specific properties of the HAAKE Viscotester iQ IHO (IHO = Instrument Head Only) version. For all other properties of the HAAKE Viscotester iQ IHO refer to the HAAKE Viscotester iQ Instruction Manual.

For a detailed description of how to operate the touch screen user interface, the optional RheoApp software and the specific parts of the Thermo Scientific HAAKE RheoWin™ software, see the HAAKE Viscotester iQ Reference Manual.

**Note** In this manual the name HAAKE Viscotester iQ is used to describe both the HAAKE Viscotester iQ (with ball-bearing drive motor) and the HAAKE Viscotester iQ Air (with air-bearing drive motor) unless stated differently.

## About this document

This manual is part of the product. It must be kept in the immediate vicinity of the instrument and accessible to all personnel at all times.

This manual provides important information on how to use the instrument.

This manual must be read completely and the contents fully understood before working with the instrument is started.

Strict compliance with all safety instructions and operating guidelines in this manual is the prerequisite for safe and proper operation of the instrument.

If this operating manual contains documentation of another supplier (in an appendix), Thermo Fisher Scientific does not ensure the correctness of their content, individual statements or technical data.

## Related documentation

In addition to this manual, Thermo Fisher Scientific provides the following documents for use with the HAAKE Viscotester iQ:

- HAAKE Viscotester iQ Instruction Manual.
- HAAKE Viscotester iQ Reference Manual.
- HAAKE RheoWin Installation and 21 CFR Part 11 Configuration User Guide.

- HAAKE RheoWin Instruction Manual.

All manuals are available (in PDF format) on the HAAKE Viscotester iQ RheoApp USB flash drive, which is part of the delivery of any HAAKE Viscotester iQ and Viscotester iQ Air rheometer.

## Safety and special notices

Make sure that you follow the caution and special notices presented in this manual. Caution and special notices appear in boxes; those concerning safety or possible damage also have corresponding caution symbols.

This manual uses the following types of caution and special notices.



**DANGER** is used to indicate a hazardous situation which, if not avoided, *will* result in death or serious injury. Each DANGER notice is accompanied by an appropriate DANGER symbol.



**WARNING** is used to indicate a hazardous situation which, if not avoided, *could* result in death or serious injury. Each WARNING notice is accompanied by an appropriate WARNING symbol.





**CAUTION** is used to indicate a hazardous situation which, if not avoided, could result in minor or moderate injury and/or damage to property, or the environment. Each CAUTION notice is accompanied by an appropriate CAUTION symbol.

**IMPORTANT** Highlights information necessary to prevent damage to software, loss of data, or invalid test results; or may contain information that is critical for optimal performance of the system.







**Note** Highlights information of general interest.

The following table lists the caution-specific symbols used in this manual together with the involved danger and remaining risks.

**Table 1.** Caution-specific symbols and their meanings (Sheet 1 of 2)

Symbol	Meaning
	<b>General warning:</b> Consult the instructions in the manual.
	<b>Chemical hazard:</b> Wear gloves and other protective equipment, as appropriate, when handling toxic, carcinogenic, mutagenic, corrosive, or irritant chemicals. Use approved containers and proper procedures to dispose of waste oil and when handling wetted parts of the instrument.

**Table 1.** Caution-specific symbols and their meanings (Sheet 2 of 2)

Symbol	Meaning
	<b>Hot surface:</b> Allow heated components to cool down before touching them.
	<b>Pinch point:</b> Keep hands away from the specified areas.
	<b>Risk of electric shock:</b> This instrument uses voltages that can cause electric shock and/or personal injury. Before servicing, shut down the instrument and disconnect it from line power.
	<b>Risk of eye injury:</b> Splattering chemicals or airborne particles may cause eye injury. Wear safety glasses when handling chemicals or servicing the instrument.
	<b>Risk of hand injuries:</b> Splattering chemicals or touching hot parts may cause hand injuries. Always wear protective gloves when using/operating the instrument.
	<b>Risk of foot injuries:</b> Always wear safety shoes.

## Safety Notes and Warnings

### IMPORTANT

- The HAAKE Viscotester iQ corresponds to the relevant safety regulations.
- The operator is solely responsible for the correct handling and proper usage of the instrument.
- The manufacturer is not liable for damages that arise due to non-intended use.



## WARNING

- In case of a technical failure or an accident the instrument must be put out of service immediately by switching it off using the mains power switch *and* pulling the mains plug.
- A continuous acoustic signal and an instructional message on the instruments touchscreen may indicate an unforeseen safety issue - follow the instructional message *and* switch off the mains power switch *and* pull the mains plug immediately.
- An unforeseen safety issue can for example be the uncontrolled heating of a temperature module due to a hardware failure.
- Explosive, combustible and toxic materials must not be measured with the HAAKE Viscotester iQ.



## CAUTION

- The instrument must be operated in such a way that it will not endanger anyone.
- The instrument must not be operated unattended.
- The instrument may not be operated if there are any doubts regarding safe operation because of its outer appearance (e.g. damages).
- The instrument and its external power supply *must* be positioned such that the socket for the mains power cable (on the external power supply), and thus the mains power cable itself, can be reached for at any moment.
- A safe operation of the instrument cannot be guaranteed if the user does not comply with this instruction manual.
- This instruction manual must be readily available at all times for all operators.
- Every operator must read this instruction manual before working with the instrument.
- This instrument is registered for one-man operation.
- The operator must have an uninterrupted view of the instrument and its surroundings.
- The rheometer must be fully visible from the PC control stand (if applicable).
- The ventilation grid at the rear side of the instrument head must not be obstructed.
- This instrument and all of its accessories must only be used for the applications it was designed for.



**CAUTION**

- The instrument must be switched off before connecting or disconnecting any cables. This is to avoid electrostatic charging resulting in a defect of the electronic circuit boards.
- To disconnect the instrument from the mains, first switch the instrument off *and* then unplug the power supplies mains cable from the wall socket.
- Do not operate the instrument with wet or oily hands.
- Do not immerse the instrument in water or expose it to spray water.
- Do not bend connection and/or mains cable, do not subject cables to stress or high temperatures (higher than 70 °C).
- Check all cables visually at regular intervals.
- Do not operate the instrument with damaged cables. When replacing a damaged cable, make sure to use an equivalent cable, see [Table 2 on page 2](#) for order numbers.
- Only operate the instrument using the power supply which was part of the original delivery (Type: GST220A24-R7B).

**CAUTION**

- Repairs, alterations or any work involving opening up the instrument should only be carried out by specialized personnel. Considerable damage can be caused by incorrect repair work. The Thermo Fisher Scientific-service department is at your disposal for any repairs you may require.
- After a repair the instruments safety must be inspected thoroughly by qualified personnel.
- Have the instrument serviced by specialists at regular intervals.
- The pressure of the air supply for the HAAKE Viscotester iQ Air must not exceed 3 bar. A higher pressure will damage the air bearing permanently.

**CAUTION**

- Thermo Fisher Scientific recommends shielding the HAAKE Viscotester iQ when operating at very low or high temperatures and handling it only with high or low temperature proof gloves and safety glasses.

**CAUTION**

- Do not clean the instrument using solvents (fire danger!), a damp cloth applied with a household cleaning substance is often sufficient.
- Consult Thermo Fisher Scientific or your local if there is any doubt about the compatibility of decontamination or cleaning agents.



### CAUTION

- The HAAKE Viscotester iQ is designed for the determination of the rheological behavior of fluid and semi-solid materials. These materials must *not* be measured with the HAAKE Viscotester iQ in case the operator (or other people) can be injured or the device can be damaged. Especially explosive, combustible and toxic materials must *not* be measured with the HAAKE Viscotester iQ.
- Suitable personal protective gear, consisting of lab coat, protective eye wear and safety gloves, must be worn at all times when working with the instrument.
- At higher angular velocities of the rotor sample material may be thrown out of the gap due to centrifugal forces. Wearing personal protective gear, see above, is recommended.

## Contacting us

Please always first address any questions to the local Thermo Fisher Scientific office, see the following web-page for a list of addresses,

<https://www.rheowin.com/contact>

or the general agent or partner company who delivered your instrument.

## International Helpdesk

You can also contact our international helpdesk directly. In that case we kindly ask you to use the contact form to which a link is provided below.

### ❖ To contact the international helpdesk

Contact form <https://tfs-3.secure.force.com/materialcharacterization/>

## Quality assurance

Dear customer,

Thermo Fisher Scientific Karlsruhe has implemented a Quality Management System certified according to ISO 9001 ff. This guarantees the presence of organizational structures which are necessary to ensure that our products are developed, manufactured and managed according to our customers expectations. Internal and external audits are carried out on a regular basis to ensure that our QMS is fully functional. We also check our products during the manufacturing process to certify that they are produced according to the specifications as well as to monitor correct functioning and to confirm that they are safe. The results are recorded for future reference.

The “Final Test” label on the product is a sign that this instrument has fulfilled all requirements at the time of final manufacturing.

Please inform us if, despite our precautionary measures, you should find any product defects. You can thus help us to avoid such faults in future.

## Warranty and service

For the warranty and any potential additional warranty, the user must ensure that the device is serviced by a Thermo Fisher Scientific approved service engineer at the following intervals:

The maintenance is required after approx. 2000 operating hours, at the latest, however, twelve months after the initial operation or the last maintenance, respectively.

Two thousand operating hours are achieved:

- At an operating period of eight hours daily (five days a week) about once a year.
- At an operating period of more than eight to sixteen hours daily about every six months.
- At an operating period of more than sixteen hours daily about every three months.

We recommend to have the maintenance carried out by Thermo Fisher Scientific or by staff authorised by Thermo Fisher Scientific as special knowledge and tools are required.

The maintenance and calibration work carried out has to be recorded by certificates in conformity with ISO 9001 ff.



## Addendum Viscotester iQ Instrument Head Only

The HAAKE Viscotester iQ Instrument Head Only version of the HAAKE Viscotester iQ consists of the instrument head and the instrument head holder only, it is meant for use in a custom setup.

**IMPORTANT** Read this manual completely before installing the instrument in a custom setup.

### Installation requirements

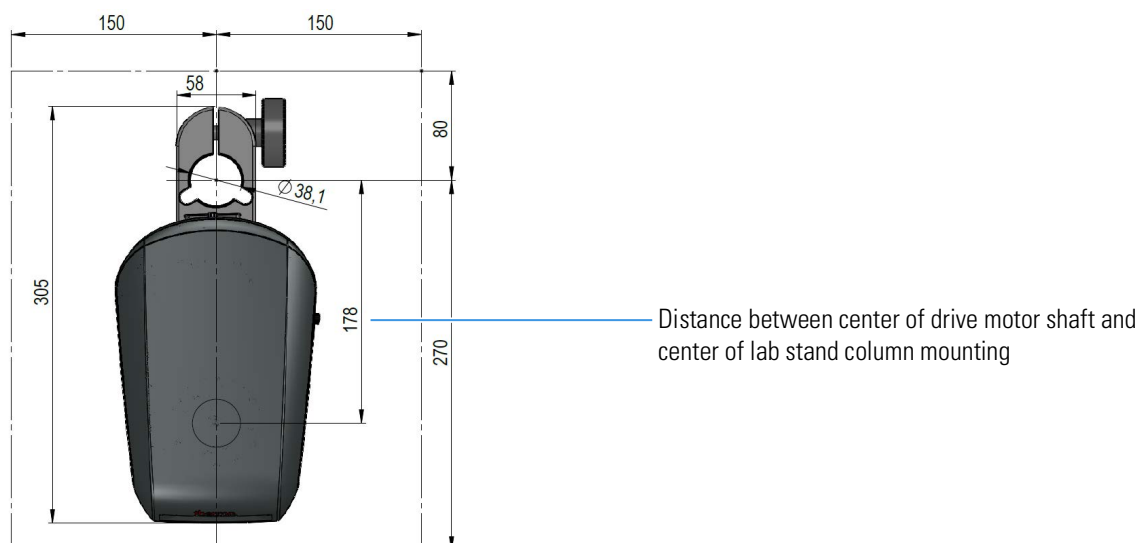
For using the HAAKE Viscotester iQ instrument head only in a custom setup, the following requirements must be met:

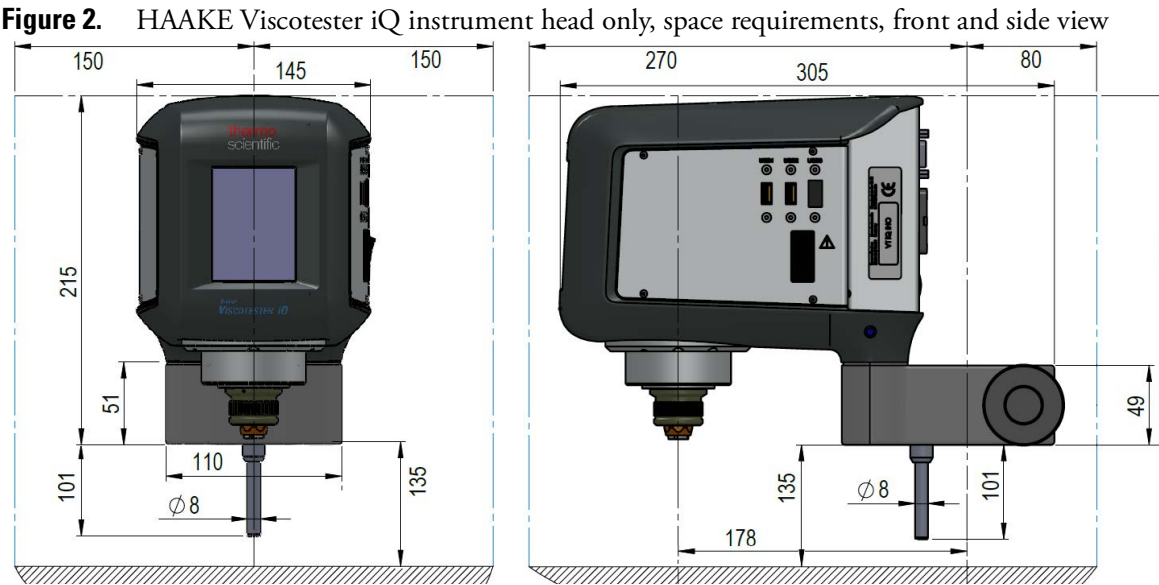
- There must be an empty space of 300 mm width and 350 mm depth around the instrument head, see the blue lines in [Figure 1](#) and [Figure 2](#).
- There must be at least 135 mm space below the measuring geometry coupling, see [Figure 2](#).
- The ambient temperature (around the instrument head) must be in the range of  $15\text{ °C} < T_{\text{ambient}} < 40\text{ °C}$ .
- The instrument head must be securely mounted to an holding device.

**Note** The weight of the instrument head including the holder is 4.4 kg (9.7 lbs).

- The power supply cable must not be pinched off by parts of the custom setup.

**Figure 1.** HAAKE Viscotester iQ instrument head only, space requirements, top view





## Unpacking

Before unpacking the instrument always carefully check the outside of the packaging for damage. In case of any visible damage make a photo of the damaged area and take a note. Damage to the packaging may, but must not, indicate damage to the instrument.

## Transportation damage

When the instrument is damaged proceed as described below:

- Compile a damage report.
- Notify the carrier (i.e. forwarding merchant, railroad company, post office, etc.).

Before returning the delivery in case of problems:

- Always first inform the dealer or the manufacturer (small problems can often be dealt with locally).

## Contents of the delivery

This section describes the contents of delivery of the HAAKE Viscotester iQ instrument head only version.

Check the contents of the delivery carefully. The standard content of the delivery of the HAAKE Viscotester iQ instrument head only (without any accessories) is shown in [Table 2](#).

**Table 2.** HAAKE Viscotester iQ instrument head only (262-0051, 262-0054<sup>a</sup>) contents of delivery  
(Sheet 1 of 2)

Item	Part number
HAAKE Viscotester iQ (instrument head + instrument head holder)	006-4637 <sup>b</sup>
HAAKE Viscotester iQ Air (instrument head + instrument head holder)	006-4638 <sup>b</sup>

**Table 2.** HAAKE Viscotester iQ instrument head only (262-0051, 262-0054<sup>a</sup>) contents of delivery  
(Sheet 2 of 2)

Item	Part number
Power supply, 220 W, 24 V	006-1545
Mains cable, 230 V (EU)	000-0724
or	
Mains cable, 115 V (US)	000-0725
or	
Mains cable, 230 V (UK)	082-2548
or	
Mains cable, 250 V (CN)	082-2546
Ethernet TCP/IP network cable	082-2526
HAAKE Viscotester iQ, Instruction Manual (English)	006-3808
and	
HAAKE Viscotester iQ, Reference Manual (English)	006-2452
Spirit level	002-4696
Screen protector film (1 piece + 1 piece applied to the screen)	006-2373
Compressed air hose (only with HAAKE Viscotester iQ Air)	082-2451
HAAKE Viscotester iQ RheoApp flash drive	098-5065

<sup>a</sup> 262-0051 is HAAKE Viscotester iQ, 262-0054 is HAAKE Viscotester iQ Air

<sup>b</sup> This part number can be found on the type plate on the back of the instrument head.

**Note** The product description HAAKE Viscotester iQ instrument head only is slightly misleading since the instrument head comes with the instrument holder mounted fixed to the instrument head.

## Setting up the HAAKE Viscotester iQ instrument head only



**CAUTION** The CE Declaration of Conformity (document 075-5024) included in the HAAKE Viscotester iQ Instruction Manual is *not* valid for the product HAAKE Viscotester iQ instrument head only, see document 075-5043 at the beginning of this manual instead.  
Since Thermo Fisher Scientific has no information on the custom setup in which the HAAKE Viscotester iQ instrument head only will be used, it is entirely the responsibility of the operator to establish a safe working setup.  
It is strongly recommended to follow the following procedure.

### ❖ To setup the HAAKE Viscotester iQ instrument head only

1. Mount the instrument head, using the instrument head holder, firmly and secure to a suitable mounting point in the custom setup.

**IMPORTANT** The instrument head must be positioned such that the operating switch on the right side of the instrument head can be reached for at any moment.

**IMPORTANT** The instrument head must be mounted/positioned such that the drive motor shaft is aligned vertically. This is especially important for the Viscotester Air.

**IMPORTANT** The setup must be such that the (external) torque acting on the drive motor shaft is coaxial to the drive motor shaft. This is especially important for the Viscotester Air.

2. Place the power supply in a suitable position in the custom setup.

**IMPORTANT** The power supply must be positioned such that it

- can be reached for at any moment, to be able to separate it from the mains wall socket (by pulling the mains plug from the mains socket).
- is protected for coming into contact with liquids, this includes the pouring of fluid onto it.

3. Make sure that the operating switch on the right side of the instrument head is in the *off* position.
4. Connect the power supply cable plug to the power supply socket on the back of the instrument head.
5. Connect one end of the power supply mains cable to the power supply.
6. Connect the other end of the power supply cable into a wall socket.

**IMPORTANT** Only use a mains cable that is suitable for the required voltage and the power consumption of the instrument. The mains cable supplied with the instrument fulfills these requirements.

## Operation

The operation of the HAAKE Viscotester iQ is described in the HAAKE Viscotester iQ Instruction Manual and the HAAKE Viscotester iQ Reference Manual.

**IMPORTANT** Read the relevant parts of the HAAKE Viscotester iQ Instruction Manual and the HAAKE Viscotester iQ Reference Manual before operating the instrument for the first time.



# Declaration of Conformity / Compliance

## WEEE Compliance / WEEE Konformität / Conformité DEEE

### WEEE Compliance

This product is required to comply with the European Union's Waste Electrical & Electronic Equipment (WEEE) Directive 2012/19/EU. It is marked with the following symbol:



Thermo Fisher Scientific has contracted with one or more recycling or disposal companies in each European Union (EU) Member State, and these companies should dispose of or recycle this product. See the [www.thermoscientific.com](http://www.thermoscientific.com) WEEE web-page for further information on Thermo Fisher Scientific's compliance with these Directives and the recyclers in your country.

### WEEE Konformität

Dieses Produkt muss die EU Waste Electrical & Electronic Equipment (WEEE) Richtlinie 2012/19/EU erfüllen. Das Produkt ist durch folgendes Symbol gekennzeichnet:



Thermo Fisher Scientific hat Vereinbarungen mit Verwertungs-/Entsorgungsfirmen in allen EU-Mitgliedsstaaten getroffen, damit dieses Produkt durch diese Firmen wiederverwertet oder entsorgt werden kann. Mehr Information über die Einhaltung dieser Anweisungen durch Thermo Fisher Scientific, über die Verwerter, und weitere Hinweise, die nützlich sind, um die Produkte zu identifizieren, die unter diese RoHS Anweisung fallen, finden sie unter [www.thermoscientific.com](http://www.thermoscientific.com).

### Conformité DEEE

Ce produit doit être conforme à la directive européenne (2012/19/EC) des Déchets d'Equipements Electriques et Electroniques (DEEE). Il est marqué par le symbole suivant:



Thermo Fisher Scientific s'est associé avec une ou plusieurs compagnies de recyclage dans chaque état membre de l'union européenne et ce produit devrait être collecté ou recyclé par celles-ci. Davantage d'informations sur la conformité de Thermo Fisher Scientific à ces directives, les recycleurs dans votre pays et les informations sur les produits Thermo Fisher Scientific qui peuvent aider la détection des substances sujettes à la directive RoHS sont disponibles sur [www.thermoscientific.com](http://www.thermoscientific.com).

# Declaration of incorporation of partly completed machinery

**ThermoFisher**  
S C I E N T I F I C

**Erklärung für den Einbau einer unvollständigen Maschine**  
**Declaration of incorporation of partly completed machinery**  
**Déclaration pour l'installation d'une quasi-machine**

075-5043

**Produktbezeichnung**  
**Product name**  
**Nom du produit**

**Identifikation**  
**Identification**  
**Identification**

HAAKE Viscotester iQ Instrument Head Only,  
HAAKE Viscotester iQ Air Instrument Head Only

262-0051, 262-0054

gilt nur für die oben aufgeführten Typen mit einer beginnenden Seriennummer  
only valid for the types listed above with a starting serial number  
ne s'applique qu'aux types mentionnés ci-dessus dont le numéro de série commence par

≥ 1 220049XX XXX

**Hersteller**  
**Manufacturer**  
**Fabricant**

**Thermo Electron (Karlsruhe) GmbH**  
**Pfannkuchstraße 10-12**  
**76185 Karlsruhe**  
**Germany**

**Dokumentationsbevollmächtigte Person**  
**Authorised person for technical file**  
**Personne autorisée à constituer le dossier technique**

**Henry Eisenlohr**  
**Thermo Electron (Karlsruhe) GmbH**  
**Pfannkuchstraße 10-12**  
**76185 Karlsruhe**  
**Germany**

Das bezeichnete Produkt ist ausschließlich zum Einbau in eine andere Maschine bestimmt.  
Die Inbetriebnahme ist solange untersagt, bis die Konformität des Endproduktes mit der Richtlinie 2006/42/EG festgestellt ist.  
Die speziellen technischen Unterlagen nach Anhang VII B wurden erstellt. Auf begründetes Verlangen behördlicher Stellen, werden diese auf dem Postweg übermittelt.

The product indicated is solely intended for the installation into another machine.  
Start-up is forbidden until the conformity of the product with the EC Directive 2006/42/EC has been confirmed.  
The relevant technical document as described in Appendix VII B is available upon request; these can be transmitted by post.

Le produit désigné est exclusivement destiné à l'installation dans une autre machine.  
La mise en route est interdite tant que le produit final n'a pas été déclaré conforme à la directive 2006/42/CE.  
Les documents techniques spécifiques selon l'annexe VII B ont été établis. Ils pourront être transmis à la suite d'une demande dûment motivée des autorités, par courrier.

D06185

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**Richtlinie  
Directive  
Directive**

**2006/42/EG  
Appendix I : 1.2, 1.5**

**Maschinenrichtlinie  
Machinery directive  
Directive des machines**

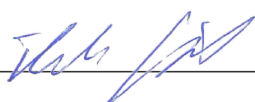
**2014/30/EU**

**Richtlinie für elektromagnetische Verträglichkeit  
Electromagnetic Compatibility Directive  
Directive relative à la compatibilité électromagnétique**

Wir erklären in unserer ausschließlichen Verantwortung, dass das Produkt, auf das sich diese Erklärung bezieht, mit den oben genannten Normen, normativen Dokumenten und den Bestimmungen der genannten Richtlinien übereinstimmt.

We declare under our sole responsibility, that this product to which this declaration relates is in conformity with the a.m. standards or other normative documents and is following the provisions of the a.m. directives.

Nous déclarons, sous notre seule responsabilité, que le produit auquel cette déclaration fait référence est conforme aux normes susmentionnées, aux autres documents normatifs et aux dispositions des directives citées.

Name 	Karlsruhe 25.11.2022	Thermo Electron (Karlsruhe) GmbH Pfannkuchstraße. 10-12, 76185 Karlsruhe Tel. + 49-721-4094-444 Fax + 49-721-4094-418
Unterschrift Signature Signature Produktlinienleiter Product Line Manager Chef de ligne de produits	Ort und Datum Place and Date Lieu et date	Hersteller Manufacturer Fabricant

## Declaration of incorporation of partly completed machinery



### Declaration of incorporation of partly completed machinery

We, Thermo Electron (Karlsruhe) GmbH, part of Thermo Fisher Scientific  
Pfannkuchstraße 10-12  
76185 Karlsruhe  
Germany

an ISO9001 certified company

declare under our sole responsibility that the

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Product Name:	HAAKE Viscotester iQ Instrument Head Only, HAAKE Viscotester iQ Air Instrument Head Only
Model:	262-0051, 262-0054
Declaration ID:	075-5043

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only valid for the types listed above with a starting serial number  $\geq 1\ 220049XX\ XXX$

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The product indicated is solely intended for the installation into another machine.  
Start-up is forbidden until the conformity of the end product with the Supply of Machinery (Safety) Regulations 2008 has been confirmed.

The relevant technical document as described in Appendix VII B is available upon request; these can be transmitted by post, Email, CD, DVD.

For the product designated above the fundamental health and safety protection requirements are in accordance with the Supply of Machinery (Safety) Regulations 2008 and are kept, excluded point \*.\*.\* within the range of the interfaces to the entire arrangement.

Meets the provisions of the regulations:

Supply of Machinery (Safety) Regulations 2008, Appendix I : 1.2, 1.5

Electromagnetic Compatibility Regulations 2016

Place and Date of issue: 25.11.2022

Name:

Function:  
Product Line Manager

  
\_\_\_\_\_  
Signature

# China RoHS Declaration



## China RoHS Declaration

Identification 标识	Product name 产品名称	Declaration ID
262-0051, 262-0054	HAAKE Viscotester iQ Instrument Head Only, HAAKE Viscotester iQ Air Instrument Head Only	075-5043

Part name 零件号	Toxic or Hazardous substances and elements 有毒或危险物质或元素					
	Lead 铅 (Pb)	Mercury 汞 (Hg)	Cadmium 镉 (Cd)	Hexavalent Chromium 六价铬 (Cr <sup>6+</sup> )	Polybrominated biphenyls 多溴联苯 (PBB)	Polybrominated diphenyl ethers 多溴联苯醚 (PBDE)
Mechanics 机械类	o	o	o	o	o	o
Electronics 电子类	o	o	o	o	o	x

o: Indicates that this toxic or hazardous substance contained in all of the homogenous materials for this part is below the limit requirement in SJ/T 11363-2006

表明该产品中，无任何一种有毒或危险物含量高于限量标准 SJ/T 11363-2006

x: Indicates that this toxic or hazardous substance contained in at least one of the homogenous materials for this part is above the limit requirement in SJ/T 11363-2006

表明该产品中，至少有一种有毒或危险物含量高于限量标准 SJ/T 11363-2006



