

Powerful
Stirring

顶置式搅拌器
Hei-TORQUE Core
操作手册



Leading Safety Standards

Superior Ease of Use

Reduced Cost of Ownership

在使用产品之前，请仔细阅读这些说明，并遵守所有说明和警告。

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➤ About this manual

This operating manual describes the features and operation of Hei-TORQUE overhead stirrers. The operating manual is an integral part of the delivery!

There are different variants of the device available, each offering specific characteristics and/or features. These are explicitly identified.

Copyright protection

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Any violation is subject to compensation for damages.



- Please read these instructions carefully before using the product and follow all instructions and warnings.
- In addition, follow the applicable national regulations and safety guidelines.
- Please ensure that this operating manual is available to every operator at all times.
- This operating manual should be given to all subsequent owners.



The latest issue of this document can be found by visiting our homepage:

[https://heidolph-instruments.com/en/service/downloads/operation-manuals# Overhead stirrers \(Hei-TORQUE\)](https://heidolph-instruments.com/en/service/downloads/operation-manuals# Overhead stirrers (Hei-TORQUE))




Typographic conventions:

Symbol	Description
→	Handling instruction, action required
✓	Result of action
▪	List of information
▪	
▪	
a.	List of variants
b.	
c.	

➤ Symbols and keywords

Standardized symbols and signal words are used in this operating manual to warn against any dangers and provide important instructions. These instructions must be strictly observed to avoid accidents and damage.

The following terms and basic symbols are used:

Symbol	Additional signal words / explanation
<p>Warning signs</p> 	<p>The yellow triangle indicates hazardous situations. It is used in combination with the following signal words:</p> <p>DANGER: Indicates a hazardous situation which, if not avoided, will result in serious injury or death.</p> <p>WARNING: Indicates a hazardous situation which, if not avoided, may result in serious injury or death.</p> <p>CAUTION: Indicates a hazardous situation which, if not avoided, may result in property damage and minor or moderate injury.</p>
<p>Prohibitory signs</p> 	<p>Prohibited:</p> <p>The red circle indicates a situation that should be avoided under all circumstances and which, if not avoided, may result in serious injury or death.</p>
<p>Mandatory signs</p> 	<p>Must be observed:</p> <p>The blue circle indicates important information. Please observe this information to avoid any property damage.</p>

Other symbols used:

Symbol	Description
→	Handling instruction, action required
✓	Result of action
▪	List of information
▪	
▪	
a. b. c.	List of variants



➤ General safety instructions

EU Declaration of Conformity



This device complies with the following EC-Directives:

- 2006/42/EC Machinery Directive
- 2014/30/EU Electromagnetic Compatibility Directive



The device has been tested according to the following directives:

- UL 61010-1 :2012/R2:2016-04
CAN/CSA C22.2 No. 61010-1:2012/U2:2016-04
- UL 61010-2-051:2015
CAN/CSA C22.2 No. 61010-2-051:2015

The device has been manufactured according to state-of-the-art technology and in compliance with recognized safety regulations. However, risks may still arise during installation, operation and maintenance.

➔ Please ensure that the operating manual is available at all times.

The device may only be used under the following conditions:

- ➔ Only operate the device if it is in a technically perfect condition.
- ➔ Only operate the device if you are properly aware of the risks and required safety measures.
- ➔ Only operate the device in accordance with the instructions given in this operating manual.
- ➔ If any information is ambiguous or missing, ask your superior or contact the manufacturer.
- ➔ Do not operate anything on the device without authorization.
- ➔ Only use the device in accordance with its intended use.

Intended use

The device may only be operated by authorized personnel.

The device is suitable for the following uses:

- Stirring
- Mixing
- Degassing
- Emulsifying
- Suspension

The device may be operated in research laboratories, other laboratories and production facilities in the following sectors:

- Chemistry
- Pharmacy
- Biology
- Environmental analytics
- Basic research
- Similar research laboratories

Unintended use/Reasonable foreseeable misuse

Any use which deviates from the device's intended use is considered to be improper. The manufacturer is not liable for damage that occurs as a result. The risk is borne by the operator alone.



Safety Instructions

When used in medical and food sectors the operator alone is responsible for compliance with the applicable regulations and standards.

Electrical safety

- Ensure that the voltage indicated on the rating plate matches the supply voltage of the country in which the device is being used.
- Ensure that the mains socket-outlet is protected by means of a residual-current device (RCD).
- Always use the supplied power supply cord provided with the device.
- Prior to use, check that the device and the power supply cord are free of visible damage.
- Repairs must be carried out only by a qualified electrician
- Prior to carry out any maintenance, cleaning or repair work, it is obligatory to disconnect and unplug the device.

Qualifications of employees

- The device may only be operated by trained personnel.
- The device may only be operated by persons who have been instructed and supervised in its proper use by trained specialist personnel.
- The device may only be operated by specialist personnel who are above the legal minimum age.
- Other persons may only work on the device under the constant supervision of experienced and trained specialist personnel.
- This operating manual must be read and understood by all persons working with the device.
- Personnel must receive safety training that ensures responsible and safe working practices.

➤ Obligations of the operator

Installation site

- The device must be installed in a suitable location.
- The device must be installed on a firm and stable surface.
- Ensure that the device and all of its components are easily accessible at all times.
- Maintain a sufficient safety clearance to, in particular, any moving and/or hot equipment components.
- It is not permitted to place or store any objects such as accessories, tools or chemicals within this clearance area during operation.
- All screw connections must be securely tightened.
- It is not permitted to operate the device near to highly flammable or explosive substances.
- Operate the device in conjunction with an extractor hood, if working with potential harmful media (see DIN EN 14175 and DIN 12924).



Safety Instructions

- The device is designed for indoor use in dry spaces only and under the following ambient conditions:

Ambient temperature	5 - 31 °C, up to 80 % relative humidity 32 - 40 °C, decreasing linearly to 50 % relative humidity, max.
Installation altitude	0 - 2,000 m above sea level
Contamination level	2
Overvoltage category	II
Permissible supply deviations	± 10 %

- If the device is operated in corrosive atmospheres, the service life of the device will decrease based on the concentration, duration and frequency of the exposure to the corrosive atmosphere e.g. concentrated hydrochloric acid (HCl).

Modifications to the device

- It is not permitted to make any unauthorised modifications or changes to the device.
- Do not attach or install any parts that have not been approved by the manufacturer.
- Only use the supplied accessories and original spare parts from the manufacturer.
- Unauthorised modifications or changes will void the EC Declaration of Conformity for the device and operation of the device will no longer be permitted.
- The manufacturer is not liable for any damage, dangers or injuries that result from unauthorised modifications and changes or due to the non-observance of the instructions in this manual.

Employee safety

- Ensure that the device is only operated by qualified specialist personnel and trained employees.
- Observe the following instructions to avoid any personal injuries and property damage:
 - Laboratory regulations
 - Accident prevention regulations
 - Hazardous Substance Act
 - Other generally accepted occupational health and safety regulations
 - Local regulations

California Residents

- Important information for California residents regarding Prop 65. Please visit www.P65Warnings.ca.gov for more information.



➤ Safety during use

- Wear the appropriate clothing when working on the device (protective clothing, protective glasses and, if necessary, safety gloves).
- Do not use the device in potentially explosive areas. The device is not protected against explosion. There is no explosion or ATEX protection available.
- Do not carry out work with naked flames in the vicinity of the device (risk of explosion).
- Do not operate any devices in the vicinity which may exhibit electromagnetic fields in the frequency range 9×10^3 Hz to 3×10^{11} Hz.
- Do not operate or assemble devices in the vicinity which are emission or radiation sources (electromagnetic radiation) for the frequency range 3×10^{11} Hz to 3×10^{15} Hz (in the optical spectral range wavelengths from $1,000\mu\text{m}$ to $0.1\mu\text{m}$).
- Do not operate or assemble appliances in the vicinity of the device which constitute emission or radiation sources for ionizing radiation or in the ultrasonic range.
- Do not operate the device where adiabatic compression or shock waves might occur (shock wave combustion).
- Do not use materials which pose a potential risk of uncontrolled energy release which might result in pressure increase (exothermic reaction; spontaneous combustion of dusts).
- Only use impellers approved by Heidolph Instruments.
- Install all cables without kinks and outside the operating and danger zone.
- Avoid putting pressure on the display when you are not operating the device.
- Do not spill liquids over the device or any parts of it.
- Remove any accidentally spilled liquids immediately.
- Eliminate errors immediately.
- Do not use abrasive material to clean the glass surface. Only wipe with damp cloth.
- Always switch the device OFF after use.

➤ Disposal



- Check the device components for hazardous substances and solvents.
- Clean all components before disposal.
- Dispose of the device in accordance with the relevant national regulations.
- Dispose of the packaging material in accordance with the appropriate national regulations.



The PE foam of the packaging material is:

- made of 65% recycled material
- recyclable up to 100%



➤ Device overview

Hei-TORQUE Core: Overall view



Hei-TORQUE Core: Display



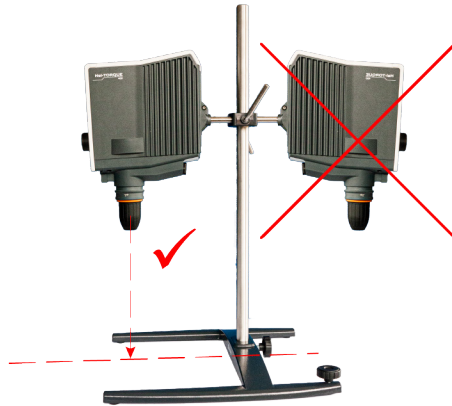
➤ Setting up device

Before start-up the device has to be mounted by aid of the support rod either to a stand or to a wall grid (see chapter "Assembly, Support rod and quick chuck", section "Mounting the support rod").

Warning: Danger of tipping due to insufficient stability. Risk of injury and damage to property.

When mounting the overhead stirrer, make sure that the structure is sufficiently stable. Otherwise, the stand may tip over at any moment!

- The stand must be used and placed on a clean and stable surface.
- Observe the specific assembly instructions for the stand.
- Make sure that the quick chuck of the mounted overhead stirrer points towards an imaginary center line between the **large sections** of the stand base bars, see figure:



- After assembly, check all screw connections/clamps for tightness.



➤ Power supply

The device is equipped with a IEC appliance inlet for power supply. A three-pole power supply cord is included in the scope of delivery. This power supply cord features a safety mechanism (V-Lock) to hold the female connector in position.



Caution:
Risk of loss of production and/or damage to property!

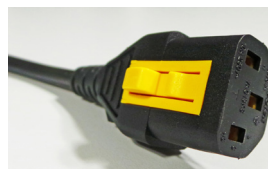
Power supply cords without V-Lock may become loose during operation due to the vibrations generated. In case of an uncontrolled shutdown, there is a risk of loss of production and/or damage to property!

For reasons of operational safety, use only the power supply cord with safety mechanism (V-Lock) included in the scope of delivery!

Connecting the power supply cord

Before connecting the power supply cord, make sure that the main switch of the appliance is switched off.

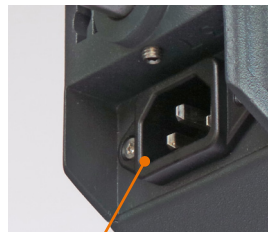
- Insert the connector with safety mechanism (yellow) into the appliance inlet on the back of the device.
- Make sure that the connector audibly engages and check the connection for tightness.
- Finally, insert the power plug into a mains socket-outlet.



Safety mechanism
V-Lock

Disconnecting the power supply cord

- Before disconnecting the power supply cord, make sure that the main switch of the appliance is switched off.
- Disconnect the power plug from the mains socket-outlet.
- Push the V-Lock to disengage and to disconnect the connector from the device.



IEC appliance inlet

➤ Switching the device on and off

Switching on the device

- Push the ON/OFF switch upwards.
- ✓ The device is switched on.
- ✓ The current software version is shown briefly.

Switching off the device

- Push the ON/OFF switch downwards.
- ✓ The device is switched off.





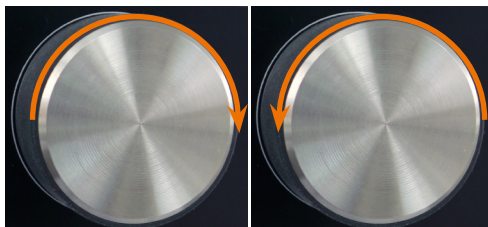
➤ Setting the speed

The overhead stirrer rotates in a clockwise direction. The speed can be set to between 20 rpm and 2,000 rpm (also see chapter "Attachments, Technical data".)



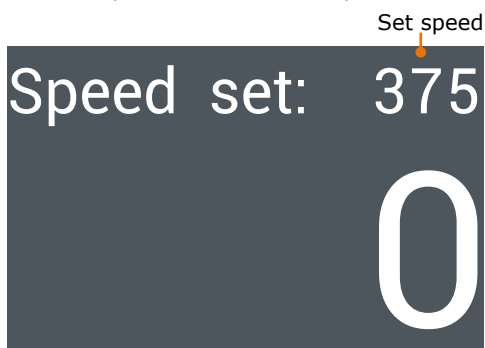
Set the speed depending on the impeller (see chapter "Technical data", section "Recommended speeds").

- ✓ The device is switched on.
 - Turn the control knob in a clockwise direction.
 - ✓ The speed increases.
 - Turn the control knob in an anticlockwise direction.
 - ✓ The speed decreases.
-
- ✓ The set speed is shown on the display next to "Speed set:".



Increase speed

Reduce speed



You can adjust the speed upwards or downwards at any time during ongoing operation using the control knob.



➤ Switching the rotation on and off



Warning:
Risk of injury!

Shattering stirring vessels may cause serious injuries due to splintering parts and escaping liquids.

- Always wear protective clothing in the vicinity of the laboratory stirrer when it is in operation.
- Never work with impellers that are unbalanced.
- Never work with the laboratory stirrer if the chuck is unbalanced.
- Select a stirring vessel that has a large enough diameter to allow the stirrer to rotate freely without touching the vessel.



Warning:
Risk of injury! Risk of entanglement!

Rotating parts could cause injuries to the user if their hair, clothing or jewellery comes into contact with or become entangled in these parts.

- Never touch any rotating parts.
- Do not wear any loose clothing, e.g. belts or ties, which could become entangled in the rotating parts.
- Do not wear long necklaces or bracelets.
- If you have long hair, wear a suitable head covering that keeps the hair in place.



Warning:
Risk of poisoning! Risk of injury!

Depending on the samples being used, the stirring process could result in chemical reactions and the release of gases.

If necessary, operate the device under an enclosed, ventilated fume cupboard.


Warning:
Risk of injury!

Switching on the stirrer at excessive speeds can result in splashing and could cause injuries depending on the properties of the samples.

Initially select a lower speed and increase it gradually as required.



Switching on the rotation

- Press the control knob.
- ✓ The impeller starts to rotate.
- ✓ The rotational speed increases within a short period of time to match the set speed.
- ✓ The current speed is shown on the display below the set speed.
- ✓ The rotation display  on the left lower edge of the screen signals that the rotation has been activated by indicating a rotational motion.
- ✓ The time display shows how long the device has been rotating.

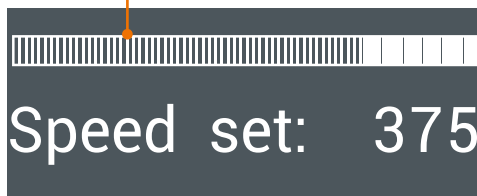


Overload operation

If your medium has a high viscosity, the device can reach the overload range.

- ✓ During overload operation, the right section of the performance indication flashes for a maximum of 2 minutes.
- ✓ The rotational speed is slowed during this time to reduce the load.
- ✓ If the load does not reduce despite the lower speed, the rotation will be stopped.
(Also see chapter "Technical data", section "Performance range").

Performance indication



In the event of an overload, check whether the impeller is blocked. It is possible that the viscosity of your medium is too high for this laboratory stirrer.

Switching off the rotation

- Press the control knob.
- ✓ The device stops rotating.
- ✓ The rotation display is stopped.
- ✓ The current operating time is displayed until a new stirring process is started by pressing the control knob or if you jump to the timer submenu.



➤ Rotation with timer function

The timer can be used to set a specific time period for the stirring process.

- The time can be adjusted from 1 second to 99 hours, 59 minutes and 59 seconds.
- A countdown will show the remaining time in hours, minutes and seconds.

Setting and saving the timer

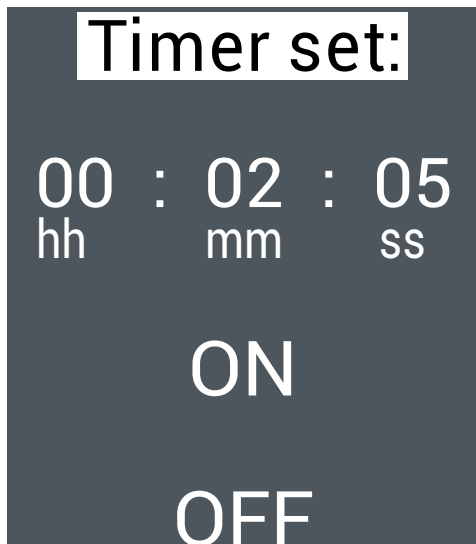
→ Press the "Timer" button.

Timer button



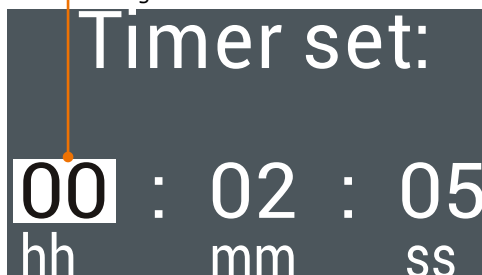
- ✓ The timer submenu will be displayed.
- ✓ The value for the last time period saved will be displayed.
- ✓ The "Timer set" line is highlighted.

Timer submenu



- Press the control knob to jump between the time settings on this line.
- ✓ The hours setting "hh" is the first value to be highlighted.
- Turn the control knob to move the value upwards or downwards as required.
- Press the control knob to confirm the value and jump to the next value.

Hours setting selected





Operation

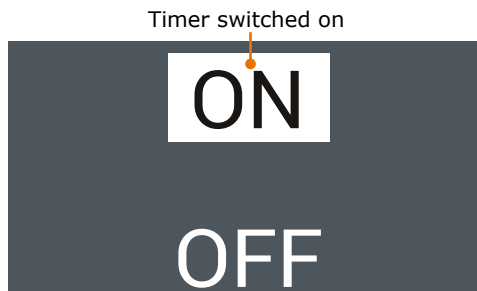
- Also set the minutes "mm" and seconds "ss" in the same way.
- ✓ After confirming the value for the seconds, the display will highlight the option "ON".

As soon as the desired time period has been set, you have 2 options:

- Activate the timer immediately
- Save the set time period and activate the timer later

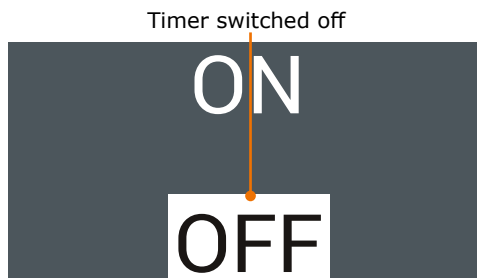
Activate the timer immediately

- Confirm the set time period by pressing "ON".
- ✓ You return to the main menu.
- ✓ The clock symbol 🕒 will be shown in the top left of the display to indicate that the timer has been activated.



Activate the timer later


- ✓ You have set the desired time period in the timer submenu.
- Confirm the set time period by pressing "OFF".
- ✓ You return to the main menu.
- ✓ The set value is saved.



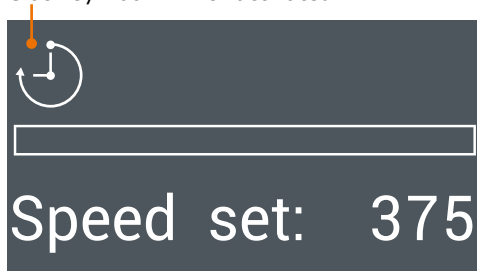
- When you are ready to activate the timer, call up the timer submenu and confirm the set time period by pressing "ON".



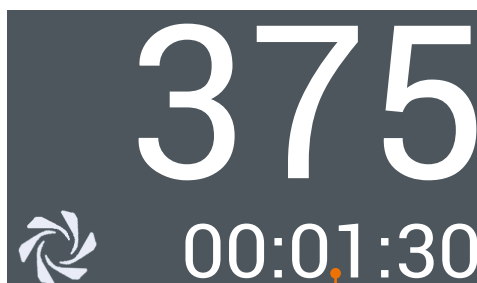
Starting the rotation with the timer

- ✓ The clock symbol  will be displayed in the top left of the display to indicate that the timer has been activated.
- ✓ The display on the lower edge of the screen shows the set time.
- Turn the control knob to set the desired speed.
- Press the control knob to start the rotation.

Clock symbol: Timer activated



- ✓ The display on the lower edge of the screen counts down and shows the remaining time in hours, minutes and seconds.
- ✓ Even if the timer has been activated, it is still possible to change the speed via the control knob or stop the rotation at any time.



Timer: remaining time

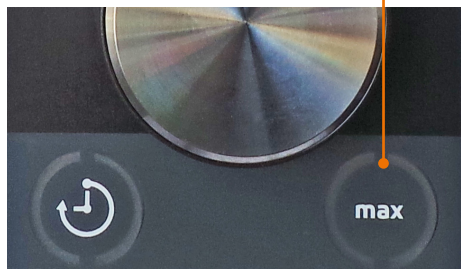


➤ High-speed function

The device is equipped with a high-speed function.

- ✓ The device is switched on.
- ➔ Press and hold down the “High-speed” button.

High-speed button



- ✓ The rotation will start if not already active and the speed increases to the maximum speed irrespective of the rotational speed that was previously set.
- ✓ As soon as you release the “High-speed” button, the rotation will either stop or it will return to the original rotational speed.



The high-speed function can be started at any time, irrespective of whether the rotation is switched on or off or whether the timer has been activated or deactivated.



If the timer has been activated and the rotation is switched off, the duration of the high-speed stirring process is not added to the “Duration” display.



➤ Chuck



Warning:
Risk of injury!

If the device is switched on when opening or closing the chuck, it is possible for the device to rotate due to unintentionally touching the control knob or the high-speed button and this could result in injuries.

Only open and close the chuck when the device is switched off.

Installing the impeller

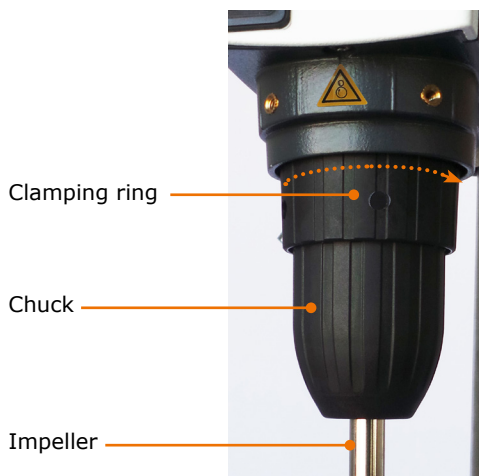


Warning:
Risk of injury!

If the chuck has not been closed properly, the impeller may become loose when it rotates and cause injuries.

Fasten the chuck securely. Periodically check that the chuck is securely fastened after prolonged operation when the device has been switched off.

- ✓ The device is switched off.
- ➔ Guide the impeller from below into the chuck until it has reached the correct height.
- ➔ Tightly hold the impeller and the chuck with one hand.
- ➔ Hold the impeller in this position as centrally as possible and then carefully close the clamping ring in a clockwise direction until you feel some resistance from the impeller.
- ➔ Align the impeller in the centre of the chuck and close the clamping ring in a clockwise direction until you hear three clicks.



Warning:
Risk of injury! Damage to the device:

If the impeller is not properly centred, vibrations could build up and cause instability and this could result in injuries.

An incorrectly mounted impeller can cause permanent damage by unbalancing the laboratory stirrer or the impeller.

Carefully center the impeller before tightening it in the clamping ring.



Removing the impeller

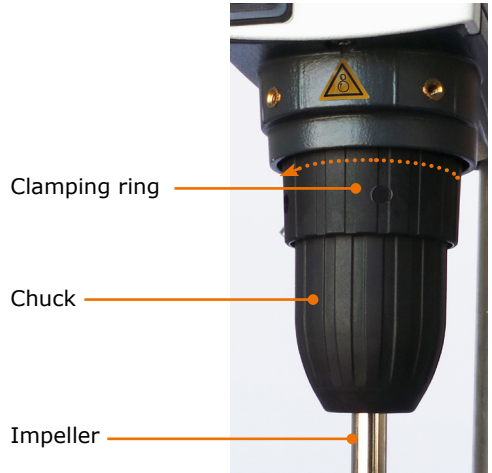


Caution:
Possible risk of injury!

If you do not hold the impeller tightly when opening the chuck, the impeller could fall out, cause damage in the local vicinity and result in injuries.

Hold the impeller tightly when opening the chuck.

- ✓ The device is switched off.
- Tightly hold the clamped impeller and the chuck with one hand.
- Turn the clamping ring by approximately 180° in an anticlockwise direction.
- ✓ The chuck is now open.
- Remove your impeller.





➤ Cleaning

The chuck and surfaces of the device can be cleaned using a damp cloth and, if required, a mild soap solution.



Warning!
Risk of electric shock!

Liquids penetrating into the device could cause the device to become live if it is still connected to the electricity supply.

Before cleaning the device:

- Switch off the device.
- Disconnect the power cord plug.

Caution:
Damage to the device

Liquids penetrating into the device could damage the electronics.

Only wipe the surfaces with a damp cloth and not a wet cloth.



Caution:
Damage to surfaces

The surfaces could be damaged by improper cleaning.

Do not use the following under any circumstances:

- Chlorine bleach or cleaning agents containing chlorine
- Substances containing solvents (e.g. acetone)
- Ammonia
- Abrasive cleaning agents such as cleaning wool, scouring agents or cleaning agents with metallic particles

Cleaning the chuck



Warning:
Risk of injury!

It is possible that a heavily soiled chuck will no longer close properly. The impeller may become loose during rotation and cause serious injuries.

Periodically check the cleanliness of the chuck after prolonged operation when the device has been switched off. Clean the chuck if it is heavily soiled.

The chuck can be dismantled for easier cleaning (see chapter "Assembly, chuck").

➤ Maintenance

Any repairs that may be required must be performed by a specialist authorized by Heidolph Instruments.

In this case, please contact Heidolph Instruments directly or your authorized Heidolph Instruments dealer.

➤ Malfunctions and troubleshooting

Error	Possible cause	Remedy
Chuck cannot be correctly closed, clicking noise when closing	Chuck was opened with too much force and has been overwound	<ul style="list-style-type: none"> ▪ Hold the clamping ring and open the chuck until after a slight resistance you hear one or more clicks ▪ Close the chuck again (also see the information below)
Rotation stops; Error message: "Error: Overload"	<ul style="list-style-type: none"> ▪ Load too high ▪ Impeller blocked 	<ul style="list-style-type: none"> ▪ Remove the cause of the blockage (viscosity of the medium may be too high) ▪ Re-start the rotation
Error message: "Error: Overheating"	Motor or electronics too hot: Overheat protection activated	<ul style="list-style-type: none"> ▪ Switch off the device ▪ Allow the motor to cool down and switch the device on again
Display remains dark after switching on	No power supply	Check that the power cord plug is connected properly to the power socket and the device



The chuck can become overwound if it is opened with excessive force. The overwinding issue has been resolved when you can no longer hear any clicks when closing the chuck.

If you experience a malfunction that cannot be resolved using the information listed above, please immediately inform your authorized Heidolph dealer.



Support rod and chuck

Mounting the support rod

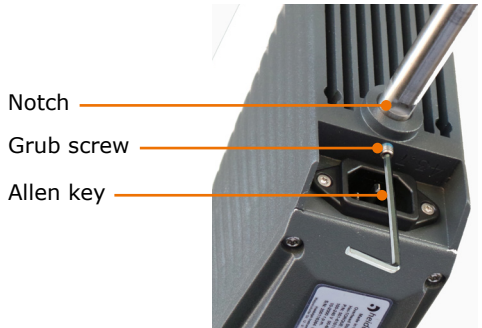
The support rod is used to mount the overhead stirrer onto e.g. a stand or lattice.

Scope of delivery:

- Support rod
- Allen key

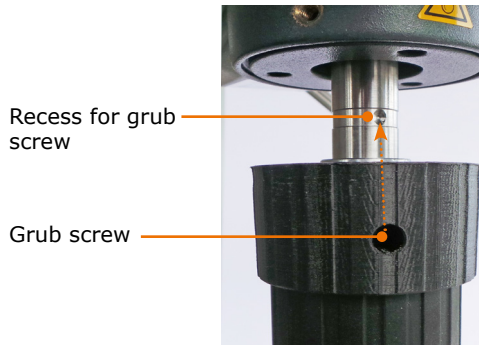
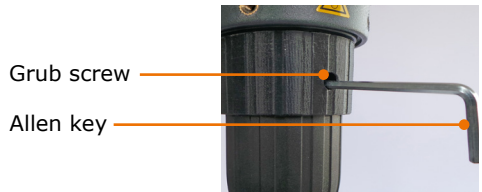
There is a drilled hole on the rear of the device for inserting the support rod.

- Push the support rod with the notch at the front as far as it will go into the hole on the rear of the device.
- Ensure that the notch on the support rod is located in front of the grub screw on the housing.
- Fix the support rod in place by tightening the grub screw with the aid of the supplied Allen key.



Dismantling the chuck

- Remove any impeller that is clamped in the chuck.
- Loosen the grub screw for the clamping ring with the aid of the supplied Allen key.
- Pull the chuck downwards and away from the hollow shaft.
- When installing the chuck again, ensure that the grub screw has been aligned with the recess on the hollow shaft.





➤ Shaft guard

Installing the shaft guard (optional accessory)

A shaft guard can be fitted to the laboratory stirrer to protect against injuries caused by the rotating shaft (see chapter "Spare parts and accessories, accessories").



Warning: **Risk of injury!**

If the device is switched on when installing the shaft guard, it is possible for the device to rotate due to unintentionally touching the control knob or the high-speed button and this could result in injuries.

Only install the shaft guard when the device is switched off.

Scope of delivery:

- 1 Two piece shaft guard
- 2 Knurled screws

Shaft guard Knurled screws

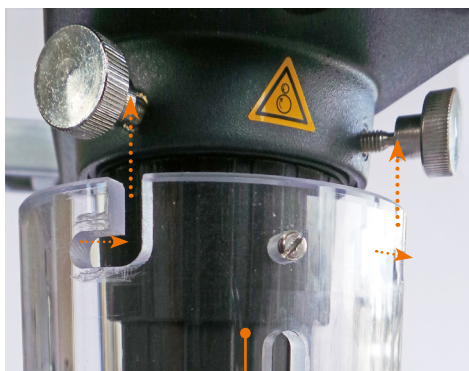


→ Insert both knurled screws into the holes above the chuck and tighten them by two or three turns.



→ Slide the two grooves on the shaft guard over the threads of the screws and then turn the shaft guard to the right until the end of the groove.

→ Carefully tighten both of the knurled screws.



Shaft guard

Dismantling the shaft guard

- Loosen both knurled screws by one or two turns.
- Turn the shaft guard to the left and remove it from the stirrer in a downwards direction.



➤ Dismantling, transportation and storage

Dismantling



Warning:
Risk of injury!

When the device is connected to the power supply, there is a risk of injury due to unintentionally switching on the impeller.

Disconnect the power cord plug before dismantling the device.

- ✓ The device is switched off.
- Disconnect the power cord from the socket and the device.
- Remove the impeller and, if necessary, the shaft guard.

Transportation and storage

- Only store and transport the device and its components after emptying and cleaning.
- Store and transport the device and its components in the original packaging or in another suitable container to prevent any damage.
- Carefully seal the packaging against any unauthorized or unintentional opening.
- Store the device in a dry and frost-free location.



Improper storage and transport may result in damage to the device and the mechanical components in the device.

Avoid jolts and vibrations when transporting the device.



➤ Scope of delivery

Component	Quantity	Product number
Hei-TORQUE Core	1	501-60411-00
Support rod	1	22-02-14-01-41
Operating manual English /German	1	01-005-005-82
Warranty registration / confirmation of condition	1	01-006-002-78
EC Declaration of Conformity	1	01-001-025-01
Power supply cable	1	Country-specific

* The product number is valid for 230 V devices in the european community. Please contact Heidolph Instruments for further product numbers on country specific varieties.

➤ Accessories

Component	Quantity	Product number
Shaft guard	1	509-08100-00
Various stands and impellers	1	See general catalogue

Additional accessories can be found in our general catalogue or at:
www.heidolph-instruments.com



➤ Technical data

Hei-TORQUE Core

Supply voltage	100 - 240 V (50/60 Hz)
Rated power (W)	105
Protection class (IEC 61140)	1 ⊕
Protection class (IEC 60529)	IP42
Sound pressure level (dB(A)) (based on IEC 61010)	< 70
Drive	EC motor
Motor protection	Software monitoring with error messages
Overload	Auto switch-off
Rated torque (Ncm)	40
Max. torque (Ncm)	65
Performance indication	Yes
Speed range (rpm)	20 - 2,000
Speed setting	Rotary knob
Speed accuracy (%)	± 1
Speed control	Electronic
Permissible duty cycle	Continuous operation
Min./max. impeller shaft Ø (mm)	0.5 - 10.5
Chuck	Keyless
Interfaces	No
Timer	Yes
Timer range (min)	0 - 6001
Timer accuracy (%)	± 1
Control panel	TFT display, monochrome, 2"
Max. volume H ₂ O (L)	25
Max. viscosity (mPa s)	10,000
Number of gear steps	1
Dimensions (mm)	W 70 H 281.5 D 195
Weight (kg)	2.3
Support rod (Ø x L) (mm)	13 x 160
Weight of support rod (kg)	0.165

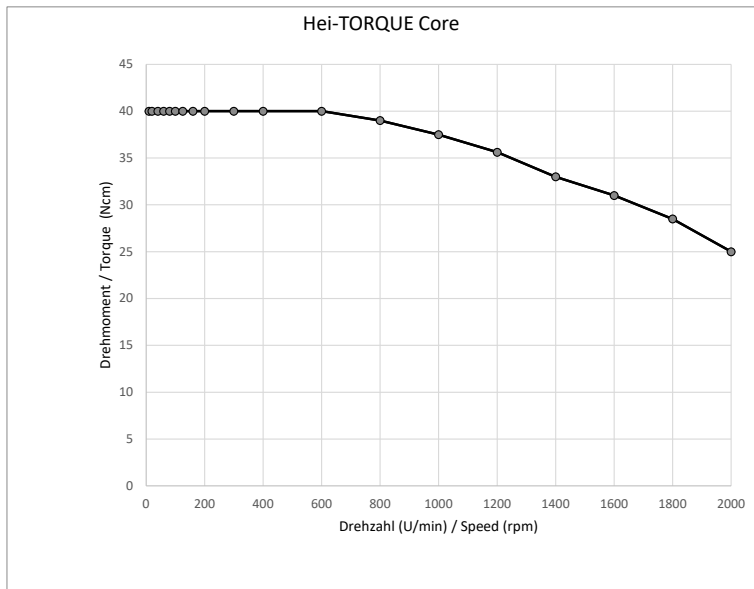


Recommended speeds

Impeller	Maximum rpm
Blade impellers: BR 10, BR 11, BR 12, BR 14	≤ 2,000
Blade impellers: BR 13,	≤ 800
Half-moon impeller: H 18	≤ 800
Propeller impellers: PR 39, PR 33	≤ 800
Propeller impellers: PR 30, PR 31, PR 32	≤ 2,000
Radial-flow impellers: TR 20, TR 21	≤ 2,000
Anchor-type impellers: AR 19	≤ 800
VISCO JET® impeller system: VISCO JET® 60-120, VISCO JET® CRACK 80-120	≤ 500

Performance range

Hei-TORQUE Core
Speed 20 - 2,000 rpm





China RoHS DECLARATION OF CONFORMITY

Heidolph Instruments GmbH & Co.KG has made reasonable efforts to ensure that hazardous materials and substances may not be used in its products.

In order to determine the concentration of hazardous substances in all homogeneous materials of the subassemblies, a "Product Conformity Assessment" (PCA) procedure was performed. As defined in GB/T 26572 the "Maximum Concentration Value" limits (MCV) apply to these restricted substances:

- Lead (Pb): 0.1%
- Mercury (Hg): 0.1%
- Cadmium (Cd): 0.01%
- Hexavalent chromium (Cr(VI)): 0.1%
- Polybrominated biphenyls (PBB): 0.1%
- Polybrominated diphenyl ether (PBDE): 0.1%

Environmental Friendly Use Period (EFUP)

EFUP defines the period in years during which the hazardous substances contained in electrical and electronic products will not leak or mutate under normal operating conditions. During normal use by the user such electrical and electronic products will not result in serious environmental pollution, cause serious bodily injury or damage to the user's assets.

The Environmental Friendly Use Period for Heidolph Instruments GmbH & Co.KG products is 25 years.

此表格是按照 SJ/T 11364-2014 中规定制定。

This table is created according to SJ/T 11364-2014

MATERIAL CONTENT DECLARATION FOR Heidolph Instruments GmbH & Co. KG PRODUCTS							
有毒有害物质或元素 Hazardous substances							
部件名称 Part name	铅 Pb	汞 Hg	镉 Cd	六价铬 Cr(VI)	多溴联 苯 PBB	多溴二 苯醚 PBDE	环保期限 标识 EFUP
包装 Packaging	○	○	○	○	○	○	
塑料外壳/组件 Plastic housing / parts	○	○	○	○	○	○	
电池 Battery	○	○	○	○	○	○	
玻璃 Glass	○	○	○	○	○	○	
电子电气组件 Electrical and electronic parts	X	X	X	○	○	○	
控制器/测量设备 Controller / measuring device	X	○	X	○	○	○	
金属外壳/组件 Metal housing / parts	X	○	○	○	○	○	
电机 Motor	X	○	○	○	○	○	
配件 Accessories	X	○	○	○	○	○	



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包装 Packaging	○	○	○	○	○	○	
塑料外壳/组件 Plastic housing / parts	○	○	○	○	○	○	
电池 Battery	○	○	○	○	○	○	
玻璃 Glass	○	○	○	○	○	○	
电子电气组件 Electrical and electronic parts	X	X	X	○	○	○	
控制器/测量设备 Controller / measuring device	X	○	X	○	○	○	
金属外壳/组件 Metal housing / parts	X	○	○	○	○	○	
电机 Motor	X	○	○	○	○	○	
配件 Accessories	X	○	○	○	○	○	



➤ Contact / Technical Service

Questions / Repair work

If any aspect of installation, operation or maintenance remains unanswered in the present manual, please get in touch with the following address.

For repairs please call Heidolph Instruments or your local authorized Heidolph Instruments distributor.



Warning! **Danger of poisoning!**

Contaminated devices can lead to severe injury or death of our employees!

When shipping items for repair that may have been contaminated by hazardous substances, please:

- advise exact substance
 - take adequate protective action towards our parts receiving and service personnel
 - mark the pack in accordance with Ordinance on Hazardous Substances
-

A "Confirmation of Condition" form can be found at the end of this operating manual.

→ Prior to shipping the device for repair, complete a copy of this form and submit it in advance.

Contact details:

Heidolph Instruments Germany

Heidolph Instruments GmbH & Co. KG
Technical Service
Walpersdorfer Str. 12
D-91126 Schwabach / Germany

Tel.: +49 - 9122 - 9920-74
Fax: +49 - 9122 - 9920-84

E-Mail: service@heidolph.de
www.heidolph.com



Heidolph Instruments North America

Phone: 1-866-650-9604
E-mail: service@heidolph.com
www.heidolphNA.com

Heidolph Instruments United Kingdom

Phone: 01799 - 5133-20
E-mail: service@radleys.co.uk
www.heidolph-instruments.co.uk

All other countries

You will find contact details of your local Heidolph distributor at www.heidolph.com



➤ Warranty



Heidolph Instruments provides a 3 year warranty for the products described here (excluding glass and wearing parts) if you register using the warranty card enclosed or online (www.heidolph.com). The warranty period begins with the date of purchase. The serial number is also valid without registration.

This warranty covers material and manufacturing defects.

In the event of a material or manufacturing defect, the device shall be repaired or replaced free of charge under the terms of the warranty.

Heidolph Instruments shall not assume liability for any damage incurred as a result of improper handling or transport.

Warranty claim?

- ➔ Please notify Heidolph Instruments or your local Heidolph distributor if you wish to make a warranty claim.



Confirmation of condition

→ In the case of repair, copy and complete the Confirmation of condition form and send it to Heidolph Instruments.

1. Details about the device

Product number _____

Serial number _____

Reason for repair _____

2. Has the device been cleaned, decontaminated/sterilized?

Yes _____ No _____

3. Is the device in a condition which does not represent any health threats for the staff of our service department?

Yes _____ No _____

If not, which substances has the device come into contact with?

4. Legally binding declaration

The customer is aware of being legally liable to Heidolph Instruments for any damages arising from incomplete and incorrect information.

Date

Signature

Company stamp

Please note

The shipper is responsible for the return of the goods in well packed condition, suitable for the mode of transport.

Sender information

Name, first name _____

Company _____

Department, research group _____

Street _____

Zip code, city _____

Country _____

Phone _____

E-mail _____

01-005-005-82-1a, 2021-05-17

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