Premium Laboratory Equipment

Laboratory and Magnetic Stirrers

Gentle but powerful

heidolph

research made easy

Don’t Compromise

Heidolph Premium Laboratory Equipment stands for reliability, precision, and efficiency. Your demand drives us to provide the fastest service, individual support, and quality without compromise. This allows you to focus purely on your research, your company, and the millions of people worldwide.
In short: research made easy.

For us, “Made in Germany” is far more than just a marketing strategy. It is part of our company philosophy.

Our location in Germany allows us to develop and produce reliable laboratory equipment with an average operational lifespan of 10 years or more. For you, this means that every purchase is an investment in the future.

All Heidolph products are developed and manufactured at our Schwabach headquarters in Nuremberg, where they undergo multi-stage quality checks in development and production. Even in continuous operation, our powerful, no-maintenance motors ensure consistent results and prevent downtimes and expensive repairs.

To us, premium service means competent and professional installation and training, the shortest possible repair and delivery times and individual expert advice – simply “research made easy”.

MADE IN
GERMANY

3-year warranty on all devices and an average operational lifespan of **10 years**

Multi-stage quality checks in development and production

Premium service according to the “research made easy” principle

Free product-demo!

You can thoroughly test our devices with a non-binding and free demo to ensure that our products meet all your requirements.

Contents

Hei-TORQUE Overhead Stirrers

Powerful Stirring

Small and light, easy to use, high torque, precise setting options and an interface for documentation purposes:
The Hei-TORQUE series offers a suitable solution for any requirement. Ideal for mixing larger quantities, high viscosities or also for applications in reactor systems. Available in different performance classes depending on the model.

Leading Safety Standards

- The individually adjustable start-up reliably prevents splashing, as the speed is slowly ramped up to the selected speed
- The optionally available stirrer shaft guard protects against accidents with the fast-rotating impeller
- The spark-free motors guarantee the highest level of safety
- To prevent overheating, the motor is switched off in the event of permanent overload – this is an important feature for unattended continuous operation
- The safety-oriented start/stop touch-function rules out inadvertent start-up
- No splashing liquids thanks to the adjustable speed limitation
- With the quick-action chuck, no additional tools are required as the impeller can be quickly clamped and safely removed.
- The open safety ring of the quick-action chuck prevents inadvertent start-up during a tool change
- A triple audible engagement confirms the maximum clamping force after tightening and thus the secure seating of the stirring tool

Superior Ease of Use

- The uniquely high torque achieves fast and excellent mixing results even when processing highly viscous media
- The speed is kept constant even when there are strong fluctuations in viscosity
- State-of-the-art motors achieve maximum performance at minimum noise level
- Searching for the chuck key is a thing of the past: With the quick-action chuck, the impellers can be easily replaced with just one hand – without the need for tools
- Whether you require impellers made of stainless steel, plastic or with Teflon coating: You will most certainly find a suitable product even for very special applications. To position the impeller correctly at a height of your choice, the stirrer shaft can simply be routed through the housing
- With just one swift move at the optional telescope stand, the laboratory stirrer can be repositioned
- Stirrer couplings, flexible shafts and seals to enable stirring under vacuum and pressure extend the application range
- Outstanding product design with glass display and touch elements for intuitive control and durability, awarded the iF DESIGN AWARD
- The standard RS 232 and USB interfaces of the Hei-TORQUE Precision models permit precise documentation of the process flow. The free Hei-Control Software is included in the scope of delivery

Reduced Cost of Ownership

- The sealed housing reliably protects the laboratory stirrer from corrosion. On average, this increases the operational lifespan to more than 10 years and reduces maintenance and repair costs
- The high torque guarantees best stirring results and thus considerably shortens process times
- Maintenance-free motors avoid downtimes and repair costs
- Special stirring tools which are able to mix even large quantities of gel shorten process times and improve results
- The sealed glass user interface increases the leak tightness of the housing thus protecting electronics and mechanics
- No unnecessary extra costs: comprehensive software is included free of charge with all Hei-TORQUE Precision models
- All devices are suitable for continuous operation without time restrictions – even when handling highest viscosities
- Achieve first-class results even in polymer research: high-performance motors are the distinguishing feature of these laboratory stirrers
- Also suitable for use in aggressive environments: the sealed housing guarantees many years of maintenance-free operation

The Hei-TORQUE Series

**Small and light, easy to use, high torque, precise setting options and an interface for documentation purposes:
The Hei-TORQUE series offers a suitable solution for any requirement.**

Hei-TORQUE Value

Clearly laid out and sturdy

Hei-TORQUE Precision

Customised and precise

Hei-TORQUE Core

The lightweight choice for big tasks

All Hei-TORQUE models are compatible with the ViSCO JET® stirring systems.

MADE IN GERMANY

All Benefits at a Glance

3-year warranty on all devices and an average operational lifespan of more than 10 years

Powerful Stirring

State-of-the-art motor technology for maximum performance at minimum noise level – below 50 db

The clearly laid out glass display with touch elements simplifies menu navigation

The sealed housing conforms to the high protection class IP 54 and is designed for many years of maintenance-free continuous operation in aggressive environments

With the quick-action chuck, the impellers can be easily replaced with just one hand – without the need for tools

The overtemperature protection reliably prevents accidents due to overheating – especially in continuous operation without time restrictions

Increased safety due to individual performance monitoring: start-up intensity, maximum rotation speed and maximum torque are adjustable

The sealed glass user interface increases the leak tightness of the housing thus protecting electronics and mechanics

Safety-oriented start/stop touch-function rules out inadvertent start-up

USB and RS 232 interface for process documentation and reproducible results

Free Hei-Control Software is included with all Hei-TORQUE precision models to ensure reliable automation of all processes.

VISCO JET® impellers mix media that cannot be mixed with conventional technology – complete circulation is even reached when processing gels

Hei-TORQUE Core

The lightweight choice for big tasks

The exceptionally light and compact design allows for integration in closed systems, such as fume hoods, reactors, or production systems. Suitable for up to 25 l of low- to medium-viscosity media.

Compact design:

- Light weight at 2,300 g
- Dimensions (w / d / h): 70 × 195 × 282 mm

Easy to use:

- Control knob for rotation speed, pushing starts or stops the function
- Timer function
- “Max” button for short-term operation at maximum speed

Performance features

- Torque up to 40 Ncm
- Speed range up to 2,000 rpm
- Viscosity up to 10,000 mPas

The large diameter of the chuck (10.5 mm) allows you to use even large impellers and VISCO JET® stirring tools. This facilitates a wide variety of applications, such as homogenization, dispersing, the dissolving of agglomerates, and many more.

In reactor systems, the torque can alternatively also be deflected via the flexible shaft, so that the overhead stirrer can be placed next to the actual set-up.

Model		P/N
Hei-TORQUE Core	40 Ncm	501-60410-00

Hei-TORQUE Value

The reliable overhead stirrer for standard applications

The Hei-TORQUE Value models are characterized by their clearly laid out display and great ease of operation. They perform stirring tasks quickly and reliably.

Clearly structured operation:

- Indication of torque tendencies to detect changes in viscosity
- Modern digital 2.4" display for intuitive operation
- Safety-oriented start / stop touch-function prevents inadvertent start-up

Forceful stirring in three performance classes:

- 100 Ncm for up to 60,000 mPas
  200 Ncm for up to 100,000 mPas
  400 Ncm for up to 250,000 mPas
  (2-gear stage design)
- Constant speed even under changing loads
- Speed range up to 2,000 rpm
- Minimum noise level at maximum power

The sealed glass user interface increases the leak tightness of the housing thus protecting electronics and mechanics.

The optionally available telescope stand almost completely compensates for the weight of the overhead stirrer. Makes it easy to change vessels or tools in no time at all.

Model		P/N
Hei-TORQUE Value 100	100 Ncm	501-61010-00
Hei-TORQUE Value 200	200 Ncm	501-62010-00
Hei-TORQUE Value 400	400 Ncm	501-64010-00

Hei-TORQUE Precision

The professional overhead stirrer for demanding applications

The Hei-TORQUE Precision models are ideal for demanding tasks that have to be reproducible and documentable. The huge number of additional features allows for perfect adjustment of the stirring operation to your individual application.

Digital 3.2" display for precise working:

- Ramp function, favorites memory, interval mode
- Graphical representation of process flow, torque indicator
- Timer / countdown / clock

Forceful stirring in three performance classes:

- 100 Ncm for up to 60,000 mPas
  200 Ncm for up to 100,000 mPas
  400 Ncm for up to 250,000 mPas
  (2-gear stage design)
- Speed range up to 2,000 rpm
- Constant speed even under changing loads
- Change of rotation direction with the Precision 100 / 200

Individually adjustable parameters:

- Intensity of start-up from gentle to fast
- Speed limitation – avoids unintentionally high speeds and splashing media
- Torque limitation – prevents breakage of glass stirrers due to overloading
- USB and standard RS 232 interface for easy process documentation

Optional: Standard RS 232 Cable

The Hei-Control Software is included in the scope of delivery and is available for free download at www.heidolph.com

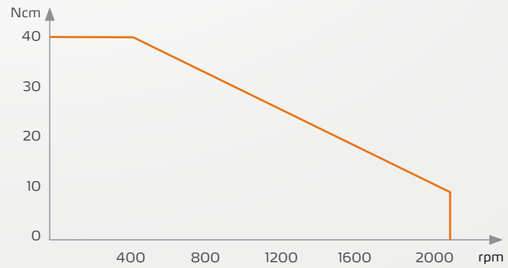
Model		P/N
Hei-TORQUE Precision 100	100 Ncm	501-61020-00
Hei-TORQUE Precision 200	200 Ncm	501-62020-00
Hei-TORQUE Precision 400	400 Ncm	501-64020-00

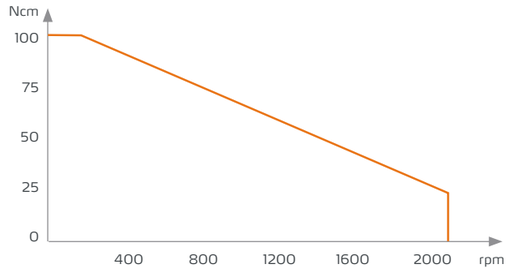
Power Ranges

40 Ncm

Power dynamics of the models:

- Hei-TORQUE Core





100 Ncm

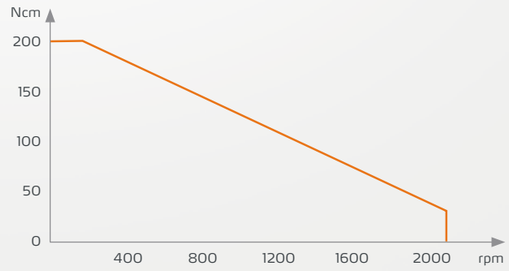
Power dynamics of the models:

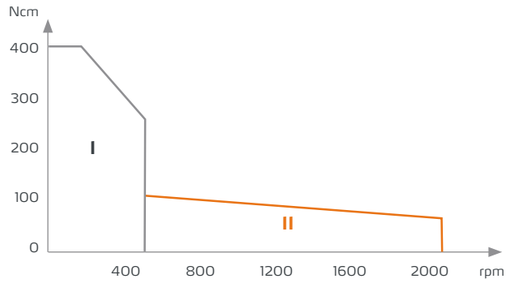
- Hei-TORQUE Value 100
- Hei-TORQUE Precision 100

200 Ncm

Power dynamics of the models:

- Hei-TORQUE Value 200
- Hei-TORQUE Precision 200





400 Ncm

Power dynamics of the models:

- Hei-TORQUE Value 400
- Hei-TORQUE Precision 400

A 2-gear stage design guarantees a high torque over the entire speed range.

Hei-Control Software

The Hei-Control Software is able to simultaneously control the magnetic stirrer Hei-PLATE and the overhead stirrer Hei-TORQUE Precision for the purpose of automating and reproducing stirrer processes. It enables the programming and visualization of process parameters as well as the export of captured data.

Use the free software to

- Program process parameters and ramps
- Read out process sequences in the software and save them
- Reload saved settings for reproducible results
- Control up to 4 devices simultaneously

Compatible with the models
Hei-PLATE Connect and Hei-TORQUE Precision

Download Hei-Control Software for free at www.heidolph.com

Packages

Hei-TORQUE Overhead Stirrers

To offer a perfect complete solution for powerful stirring and easy operation in the laboratory, the Hei-TORQUE series was expanded by various product packages.

Each Hei-TORQUE package contains a telescope stand and a corresponding clamp to ensure ideal use on laboratory benches.

Hei-TORQUE Value 100

- Hei-TORQUE Value 100
- Telescope stand
- Clamp

P/N 501-61019-00

Hei-TORQUE Precision 100

- Hei-TORQUE Precision 100
- Telescope stand
- Clamp

P/N 501-61029-00

Hei-TORQUE Precision 200

- Hei-TORQUE Precision 200
- Telescope stand
- Clamp

P/N 501-62029-00

Hei-TORQUE Precision 400

- Hei-TORQUE Precision 400
- Telescope stand
- Clamp

P/N 501-64029-00

Technical Specifications

Overhead Stirrers

Model	Hei-TORQUE Core	Hei-TORQUE Value 100	Hei-TORQUE Value 200	Hei-TORQUE Value 400	Hei-TORQUE Precision 100	Hei-TORQUE Precision 200	Hei-TORQUE Precision 400
Power rating Motor input/output	105/75W	90/50 W	120/80 W	150/90 W	90/50 W	120/80 W	150/90 W
Number of gear speeds	1	1	1	2	1	1	2
Speed range	20–2,000 rpm	10–2,000 rpm	10–2,000 rpm	10–400 rpm (gear speed I) 20–2,000 rpm (gear speed II)	10–2,000 rpm	10–2,000 rpm	10–400 rpm (gear speed I) 20–2,000 rpm (gear speed II)
Change of rotation direction	–	–	–	–	yes	yes	–
Rotation speed indicator	digital	digital	digital	digital	digital	digital	digital
Control panel	monochrome 2.4"	monochrome 2.4"	monochrome 2.4"	monochrome 2.4"	colour 3.2"	colour 3.2"	colour 3.2"
Speed control	electronic	electronic	electronic	electronic	electronic	electronic	electronic
Max. torque	40 Ncm*	100 Ncm	200 Ncm	400 Ncm	100 Ncm	200 Ncm	400 Ncm
Torque indicator	Symbol	Symbol	Symbol	Symbol	Value	Value	Value
Behaviour in case of overload	Automatic cut-out with display	Automatic cut-out with display	Automatic cut-out with display	Automatic cut-out with display	Automatic cut-out with display	Automatic cut-out with display	Automatic cut-out with display
Motor protection	Temperature monitoring software	Temperature monitoring software	Temperature monitoring software	Temperature monitoring software	Temperature monitoring software	Temperature monitoring software	Temperature monitoring software
Max. viscosity	10,000 mPas	60,000 mPas	100,000 mPas	250,000 mPas	60,000 mPas	100,000 mPas	250,000 mPas
Max. volume H_2O	25 l	50 l	50 l	100 l	50 l	50 l	100 l
Analogue/digital interface	–	–	–	–	USB and RS 232	USB and RS 232	USB and RS 232
Permissible duty cycle	Continuous operation	Continuous operation	Continuous operation	Continuous operation	Continuous operation	Continuous operation	Continuous operation
Counter/timer	yes	–	–	–	yes	yes	yes
Stirrer shaft diameter max. Ø	10.5 mm	10.5 mm	10.5 mm	10.5 mm	10.5 mm	10.5 mm	10.5 mm
Dimensions device w/d/h	70×195×282 mm**	86×247×340 mm**	86×247×340 mm**	93×247×340 mm**	86×247×340 mm**	86×247×340 mm	93×247×340 mm**
Dimensions support rod Ø×w	13×160 mm	13×160 mm	13×160 mm	13×160 mm	13×160 mm	13×160 mm	13×160 mm
Weight	2.3 kg	4.4 kg	5.1 kg	5.3 kg	4.4 kg	5.1 kg	5.3 kg
Permissible ambient conditions	5–31 °C at 80 % rel. humidity, 32–40 °C decreasing linearly up to max. 50 % rel. humidity	5–31 °C at 80 % rel. humidity, 32–40 °C decreasing linearly up to max. 50 % rel. humidity	5–31 °C at 80 % rel. humidity, 32–40 °C decreasing linearly up to max. 50 % rel. humidity	5–31 °C at 80 % rel. humidity, 32–40 °C decreasing linearly up to max. 50 % rel. humidity	5–31 °C at 80 % rel. humidity, 32–40 °C decreasing linearly up to max. 50 % rel. humidity	5–31 °C at 80 % rel. humidity, 32–40 °C decreasing linearly up to max. 50 % rel. humidity	5–31 °C at 80 % rel. humidity, 32–40 °C decreasing linearly up to max. 50 % rel. humidity
Protection class DIN EN 60529	IP 42	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54

Standard supply voltage: 230 V. Other supply voltages upon request.

* 65 Ncm for short-term overload operation
** Height from upper edge of device to lower edge of chuck with jaws completely retracted

Stirring Tools

Precise working with an overhead stirrer critically depends on the right choice of stirring tool. These stirring tools differ in the type of flow they cause in the medium, in the speed-dependent field of application and in their design to suit different viscosities.

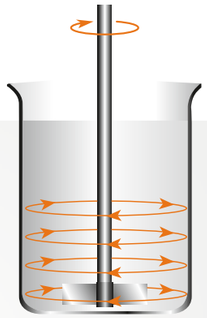
For each application the correct stirring tool

Gassing of liquids	Homogenizing, emulsifying, suspending	Stirring of viscous media
		
Radial-Flow Impellers 	**Propeller-Type or Blade Impellers** 	**Anchor-Type Impeller Propeller-Type Impeller PR 39 VISCO JET®** 

Blade / Half-Moon Impellers

The following applies to all stirring tools: optimum mixing results are achieved if the vessel size and positioning of the stirring tool are perfectly matched.

- Primary flow direction is tangential
- These impellers are particularly recommended for applications which require average to high speeds
- For mixing tasks with low to medium viscosity



BR 10 Cross-Blade Impellers

Blade size	Material	Length	Ø stirrer shaft	Speed	P/N
50 × 12 mm	Stainless steel (V4A)	400 mm	8 mm	2,000 rpm	509-10000-00

BR 11 Straight-Blade Impellers

Blade size	Material	Length	Ø stirrer shaft	Speed	P/N
50 × 12 mm	Stainless steel (V4A)	400 mm	8 mm	2,000 rpm	509-11000-00

BR 12 Pivoting-Blade Impellers

With tilting blades for narrow neck vessels

Blade size	Material	Length	Ø stirrer shaft	Speed	P/N
60 × 15 mm	Stainless steel (V4A)	400 mm	8 mm	2,000 rpm	509-12000-00

BR 13 Square-Blade Impellers

Blade size	Material	Length	Ø stirrer shaft	Speed	P/N
70 × 70 mm	Stainless steel (V4A)	450 mm	8 mm	800 rpm	509-13000-00

BR 14 Collapsible-Blade Impellers

With collapsible blade for narrow neck vessels

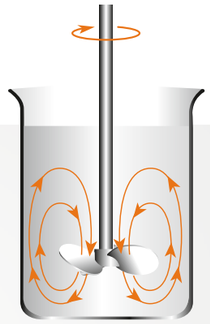
Blade size	Material	Length	Ø stirrer shaft	Speed	P/N
90 × 10 mm	Stainless steel (V4A)	400 mm	8 mm	800 rpm	509-14000-00

HR 18 Half-Moon Impellers

With tilting blades for narrow neck vessels, ideally suited for stirring in round bottom flasks

Blade size	Material	Length	Ø stirrer shaft	Speed	P/N
65 × 18 × 3 mm	PTFE	350 mm	8 mm	800 rpm	509-18000-10

Propeller-Type Impellers



- Primary flow direction is axial
- These impellers are particularly recommended for applications which require average to high speeds
- For mixing tasks with low to high viscosity
- Excellent mixing properties for homogenization and suspensions

PR 30 Pitched-Blade Propeller

Ø propeller	Material	Length	Ø stirrer shaft	max. rpm	P/N
58 mm	Stainless steel (V4A)	400 mm	8 mm	2,000 rpm	509-30000-00

PR 31 Ringed Propeller

Ø propeller	Material	Length	Ø stirrer shaft	max. rpm	P/N
33 mm	Stainless steel (V4A)	400 mm	8 mm	2,000 rpm	509-31000-00

PR 32 Ringed Propeller

Ø propeller	Material	Length	Ø stirrer shaft	max. rpm	P/N
45 mm	Stainless steel (V4A)	400 mm	8 mm	2,000 rpm	509-32000-00

PR 33 Ringed Propeller

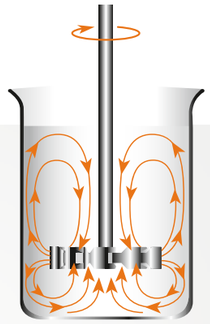
Ø propeller	Material	Length	Ø stirrer shaft	max. rpm	P/N
66 mm	Stainless steel (V4A)	400 mm	8 mm	800 rpm	509-33000-00

PR 39 Pitched-Blade Impeller

Perfect mixing results even at high viscosities

Ø propeller	Material	Length	Ø stirrer shaft	max. rpm	P/N
75 mm	PTFE	350 mm	8 mm	800 rpm	509-39000-10

Radial-Flow Impellers



- Primary flow direction is radial
- These impellers are particularly recommended for applications which require average to high speeds
- For mixing tasks with low to average viscosity
- Ideal for gassing of liquids and for emulsifying

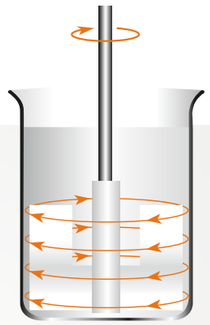
TR 20 Radial-Flow Impeller

Ø turbine	Material	Length	Ø stirrer shaft	Speed	P/N
28 mm	Stainless steel (V4A)	400 mm	8 mm	2,000 rpm	509-20000-00

TR 21 Radial-Flow Impeller

Ø turbine	Material	Length	Ø stirrer shaft	Speed	P/N
50 mm	Stainless steel (V4A)	400 mm	8 mm	2,000 rpm	509-21000-00

Anchor-Type Impeller



- Primary flow direction is tangential
- This impeller is particularly recommended for applications which require a low to average speed
- For mixing tasks with high viscosity

AR 19 Anchor-Type Impeller

Blade size	Material	Length	Ø stirrer shaft	Speed	P/N
60 × 40 × 5 mm	PTFE	350 mm	8 mm	800 rpm	509-19000-10

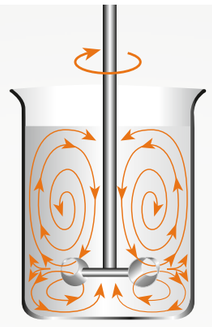
VISCO JET® Stirring System

The all-rounder for thick and thin

The VISCO JET® stirring system from VISCO JET Rührsysteme GmbH is based on the so-called cone principle. Turbulences are generated by the dynamic pressure at the displacer inlet and by the accelerated flow within the displacer (so-called nozzle effect). These turbulences collide during the circular movement of the stirring tool and lead to the revolutionary mixing movement.

- Reduced process times with clearly improved mixing results
- The stirring principle achieves complete degassing of the medium – frothing and air ingress are effectively prevented
- Even with media that cannot be mixed with conventional impellers, complete circulation is achieved
- Even at low speeds, the special shape triggers a unique flow with its own inherent dynamics
- A system for virtually any stirring task involving low to high viscosity media
- Also compatible with the compact Hei-TORQUE Core, as it also features a large-diameter chuck (10 mm)

The only impeller world wide capable of completely mixing larger quantities of high-viscosity liquids and gels.



Fields of use

- Beverage production, dairy products
- Food, sugar and confectionery production
- Chemistry, petrochemistry, ceramics, water treatment
- Pharmaceuticals, cosmetics production
- Paint and varnish production
- and many more

VISCO JET® Stirrers

VISCO JET® – 60 mm Ø

Material	Length	Ø stirrer shaft	Ø Vessel	Speed	P/N
Stainless steel (V4A)	500 mm	10 mm	80–150 mm	200–800 rpm	509-16060-00

VISCO JET® – 80 mm Ø

Material	Length	Ø stirrer shaft	Ø Vessel	Speed	P/N
Stainless steel (V4A)	500 mm	10 mm	115–200 mm	200–700 rpm	509-16080-00

VISCO JET® – 120 mm Ø

Material	Length	Ø stirrer shaft	Ø Vessel	Speed	P/N
Stainless steel (V4A)	500 mm	10 mm	170–300 mm	120–500 rpm	509-16120-00

VISCO JET® – 80 mm Ø (POM)

Material	Length	Ø stirrer shaft	Ø Vessel	Speed	P/N
POM*	500 mm	10 mm	115–200 mm	200–700 rpm	509-16081-00

VISCO JET® – 120 mm Ø (POM)

Material	Length	Ø stirrer shaft	Ø Vessel	Speed	P/N
POM*	500 mm	10 mm	170–300 mm	120–500 rpm	509-16121-00

* Stirring device: Plastic (POM), hub: brass, shaft: polyamide-coated

VISCO JET® CRACK – 80 mm Ø

Material	Length	Ø stirrer shaft	Ø Vessel	Speed	P/N
Stainless steel (V4A)	500 mm	10 mm	115–200 mm	200–700 rpm	509-17080-00

VISCO JET® CRACK – 120 mm Ø

Material	Length	Ø stirrer shaft	Ø Vessel	Speed	P/N
Stainless steel (V4A)	500 mm	10 mm	170–300 mm	120–500 rpm	509-17120-00

One stirrer shaft is always included in the scope of delivery

Further Accessories

Universal Stand S2

Stand tube Ø 25 mm,
height 700 mm,
leg distance 370 mm,
weight 5.8 kg

P/N 570-12000-00

Stand S2 XXL

Stand tube Ø 25 mm,
height 1.000 mm,
leg distance 370 mm,
weight 6.0 kg

P/N 570-12200-00

Telescope Stand

Stand tube Ø 32 mm,
height 725 mm to 1,025 mm,
leg distance 370 mm,
weight 7.7 kg

P/N 570-12100-00

Clamp

For stand S2, S2 XXL and
telescope stand, Ø 13 – 32 mm

P/N 570-22000-00

Flex Coupling

With clamping spigot, for
stirrer shafts with Ø 10 mm

P/N 509-03000-00

Stirrer Guide (NS 29/32)

For stirrer shafts with Ø 8 mm,
ground PTFE core; suitable for
vacuum, perfect guide for stainless
steel and glass stirrer shafts

P/N 509-09000-00

Shaft Guard

For Hei-TORQUE, made of PMMA,
incl. adapter set, height-adjustable
from approx. 187 – 312 mm

P/N 509-08100-00

Flexible Shaft

Incl. chuck,
1,300 mm overall length

P/N 509-07000-00

RS 232 Cable

9-pin, for Hei-Connect and
Hei-TORQUE Precision models

P/N 14-007-040-72

Adapter set (without illustration)
To fasten the stirrer shaft guard on the Hei-TORQUE Overhead Stirrer

P/N 11-002-501-02

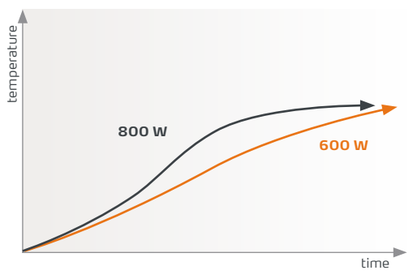
Hei-PLATE Magnetic Stirrer

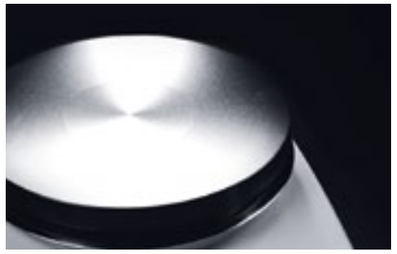
Homogenous Stirring

The sturdy magnetic stirrers of the Hei-PLATE series were developed to mix low-viscosity liquids – from gentle to intensive – in an optimal way. They are ideally suited for homogenizing organic and inorganic substances. The premium devices offer maximum safety and optimum ease of use. 800 W heating power (for 230 V models) and the special Kera-Disk® hotplate with aluminum core provide the shortest heating phases and thus a permanent cost reduction.

Leading Safety Standards

- In order to categorically exclude accidents and fire, all models have two independent safety circuits that automatically switch off the hotplate in the event of an unwanted rise in temperature
- A combination with Heat-On attachments makes the application even safer
- All models are equipped with a visual residual heat indicator to prevent burns
- For safety reasons, the device is switched off completely in the event of a short circuit, broken sensor of the temperature sensor, defective motor and in the event of a processor fault
- A separate On / Off button for the heating function prevents unintentional heating. The activated heating function is clearly recognizable by the illumination of the button
- To prevent any splashing, the rotation speed ramps up slowly until it has reached the desired value
- Damage to the device is impossible even at the highest temperatures – all models are equipped with a fire-resistant die-cast housing
- Even with the fastest heating times compared to conventional magnetic stirrers, the built-in PID controller guarantees precise control without overshooting the temperature





Superior Ease of Use

- The unique Kera-Disk® coating is extremely resistant to chemicals and scratches. The hotplate is therefore easy to clean and dirt can be easily removed. A PID controller ensures precise control of the heating process
- The powerful stirring magnet allows the stirring rod to be safely entrained even with larger quantities of up to 20 l
- If the hotplate fails, the stirring process is not interrupted. This prevents the sample from overheating
- Efficient cold insulation prevents condensation in the housing and thus contact between condensation water and electronic components – ideal for working with dry ice
- On devices with a display, all parameters can be read from the large, illuminated display, even from a greater distance
- With the free software support for the Hei-Connect model, processes can be reliably automated and documented – for up to four devices simultaneously

Reduced Cost of Ownership

- Clearly shorter process times. The high heating power of 800 Watt enables 35 % faster heating times compared to conventional magnetic stirrers with 600 Watt
- Thanks to its aluminum core, the Kera-Disk® hotplate guarantees the fastest heating times. Due to the resistant ceramic coating, the plate is chemical-resistant and scratch-proof
- Corrosion-protected electronics add many years to the operational lifespan and reduce expenditure for new purchases
- Wear- and maintenance-free motors save repair and spare part costs
- The average operational lifespan is on average more than 10 years, thus making your purchase a worthwhile investment
- The sealed housing of the magnetic stirrers guarantees a long service life with low susceptibility to repairs

MADE IN GERMANY

All Benefits at a Glance

3-year warranty on all devices and an average operational lifespan of more than 10 years

Safe Heating and Mixing

With the free Hei-Control Software for Hei-Connect, process parameters can be controlled and stored via a PC

The Kera-Disk® heating plate guarantees fastest heating times; a resistant ceramic coating makes the plate resistant to chemicals

The sealed housing protects the electronic and mechanical components of the magnetic stirrer against aggressive media and vapors

If the heating plate fails, the stirring process is NOT interrupted; this prevents the sample from overheating

An independent second safety circuit automatically switches off the hotplate if the temperature rises unintentionally

Damage to the device is impossible even at the highest temperatures – all models are equipped with a fire-resistant die-cast housing

The device is switched off completely in the event of a short circuit, broken sensor of the temperature sensor and in the event of a processor fault

A separate On / Off button for the heating function prevents unintentional heating.
The activated heating function is clearly recognizable by a visual indicator. In addition, a residual heat indicator effectively protects against burns after the heating function has been switched off

The high heating power of 800 Watt enables 35 % faster heating times compared to conventional magnetic stirrers with 600 Watt.

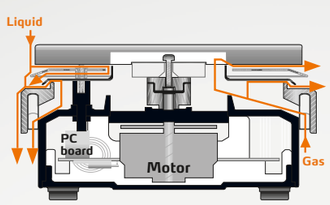
The Hei-PLATE Series

The Hei-PLATE magnetic stirrers impress through a sealed and fireproof housing and an unique Kera-Disk® hotplate coating, which stands for chemical resistance and fastest heat-up times. With and without heating function.

Kera-Disk® top plate combines chemical resistance and fastest heat transfer.

Robust and resistant housing.

Maximum safety and superior ease of use.



Magnetic Stirrers without Heating Function

Hei-Mix S

For stirring tasks in biology and biochemistry

- With space-saving polyamide housing
- The white PVDF top plate is ideally suited for titrations and has a diameter of 104 mm
- The speed range of up to 2,200 rpm is sufficient for applications of up to 5 l

Hei-Mix L

For large stirring tasks

- Due to the Kera-Disk® ceramic coating, the top plate is chemical-resistant and scratch-proof
- The heat from the motor is not transferred to the top plate. In this way, thermolabile substances are protected
- To treat the sample gently, the rotation speed ramps up slowly until it has reached the desired value
- Ideal for applications up to 20 l, as the diameter of the plate is 145 mm and the speed range extends from 100 to 1,400 rpm

Model	P/N
Hei-Mix S	503-02000-00
Hei-Mix L	505-00000-00

Magnetic Stirrers with Heating Function

Hei-Standard

For all standard applications without temperature sensor

Easy to use: two adjustment knobs for direct access to the heating and stirring function parameters.

- Two rotary knobs facilitate setting the speed between 100 and 1,400 rpm with a speed accuracy of ±2 % and a max. temperature of 300 °C
- A separate On / Off button for the heating function prevents unintentional heating. The activated heating function is indicated by the illumination of the button
- A flashing light signals the residual heat and thus effectively warns against burns even after the heating function has been switched off
- To protect against overheating, an independent safety circuit switches the heating off if the set temperature is exceeded by 25 °C

Model	P / N
Hei-Standard	505-20000-00

Hei-Tec

For high demands with temperature sensor

Precise setting options and monitoring of the device parameters via the digital display as well as port for the temperature sensor.

- Speed adjustment between 100 and 1,400 rpm with a speed accuracy of ±2 % and the maximum temperature of 300 °C
- A separate On / Off button for the heating function prevents unintentional heating. The activated heating function is indicated by the illumination of the button. A flashing light signals the residual heat and thus effectively warns against burns even after the heating function has been switched off
- Even from a distance, the values can be easily read on the illuminated display; the activated speed control is also easily recognizable by the key illumination
- Simply set the desired heating plate temperature to the exact degree using the rotary knob
- To protect the sample, the external sensor monitoring automatically switches off the heating if the sensor is not immersed in the medium
- To protect against overheating, an independent safety circuit switches the heating off if the set temperature is exceeded by 25 °C

The optionally available temperature sensor Pt 1000 achieves precise values without any temperature fluctuations.

Model		P / N
Hei-Tec		505-30000-00
Hei-Tec	with Pt 1000 temperature sensor	505-30081-00

Hei-Connect

For comprehensive process documentation and reproducible results

For accurate process documentation with precise setting options and for monitoring the device parameters via the digital display as well as port for the temperature sensor Pt 1000.

Reproducible results through programming of ramps and interval processes. With RS 232 interface for detailed process documentation compiled directly at the PC.

- Precise setting options and monitoring of device parameters via the digital display
- With port for the optional temperature sensor Pt 1000 for precise values without temperature fluctuations
- All values can be easily read on the illuminated display even from a distance
- Illuminated buttons indicate activated functions
- With the control knob, the speed can be accurately set between 100 and 1,400 rpm with a speed accuracy of ±2 % and a maximum temperature of 300 °C
- To protect against overheating, an independent safety circuit switches the heating off if the set temperature is exceeded by 25 °C
- To protect the sample, the external sensor monitoring automatically switches off the heating if the sensor is not immersed in the medium
- The timer function allows you to define separate expiry times for the heating and rotation functions. At the end of the process an acoustic signal sounds
- Residual heat indicator effectively protects from burns

Model		P/N
Hei-Connect		505-40000-00
Hei-Connect	with Pt 1000 temperature sensor	505-40081-00

The Hei-Control Software is included in the scope of delivery and is available for free download at www.heidolph.com

Packages

Hei-PLATE Magnetic Stirrer

SILVER 1

- Hei-Tec
- Temperature sensor Pt 1000 (V4A)
- Clamping system for Pt 1000 (includes support rod and attachment with cable conduit)

P/N 505-30080-00

SILVER 2

- Hei-Connect
- Temperature sensor Pt 1000 (V4A)
- Clamping system for Pt 1000 (includes support rod and holding fixture with cable conduit)
- Interface cable RS 232

P/N 505-40080-00

GOLD 1

- Hei-Tec
- Temperature sensor Pt 1000 (V4A)
- Clamping system for Pt 1000 (includes support rod and holding fixture with cable conduit)
- Multi-Well clamping system with the following inserts: 2x 25 ml, 2x 50 ml, 2x 100 ml

P/N 505-81600-00

GOLD 2

- Hei-Standard
- Multi-Well clamping system with the following inserts: 2x 25 ml, 2x 50 ml, 2x 100 ml

P/N 505-81500-00

Air instead of water.

The Findenser™ – the green Alternative

Safety for your laboratory

The Findenser™ is a high performance condenser and replaces the need for water-cooled condensers in over 95 % of all common chemistry applications. The finned aluminum jacket provides excellent heat transfer.

Leading Safety Standards
No risk of water leaks and flooding from running water – unattended and continuous use

Superior Ease of Use
Easy to set up, no tubing required – more space in your laboratory

Reduced Cost of Ownership
No water usage – economical and resource-friendly solution

- Immediate use
- Absolutely flexible – no water connection required
- Large cooling surface
- No running costs
- No difference in performance to conventional reflux condensers

Findenser NS24 Cone	NS24 Socket	400 mm	505-81700-00
Findenser NS29 Cone	NS24 Socket	400 mm	505-81710-00
Findenser NS19 Cone	NS19 Socket	400 mm	505-81720-00
Findenser Mini NS24 Cone	NS24 Socket	275 mm	505-81800-00
Findenser Mini NS19 Cone	NS19 Socket	275 mm	505-81810-00
Findenser Mini NS14 Cone	NS14 Socket	275 mm	505-81820-00

Findenser™ attachment kit:
2x boss head, 2x retort clamp, stay bar — 11-300-008-23

REFLUX PACKAGE TEC MINI

- Hei-Tec
- Pt 1000
- Heat-On block 250 ml
- Findenser Mini NS24/24
- Attachment kit

P/N 505-30732-00

REFLUX PACKAGE TEC

- Hei-Tec
- Pt 1000
- Heat-On block 1 l
- Findenser NS29/24
- Attachment kit

P/N 505-30715-00

REFLUX PACKAGE CONNECT MINI

- Hei-Connect
- Pt 1000
- Heat-On block 250 ml
- Findenser Mini NS24/24
- Attachment kit

P/N 505-40732-00

REFLUX PACKAGE CONNECT

- Hei-Connect
- Pt 1000
- Heat-On block 1 l
- Findenser NS29/24
- Attachment kit

P/N 505-40715-00

Technical Specifications

Magnetic stirrers without heating function

Model	Hei-Mix S	Hei-Mix L
Speed range	0–2,200 rpm	100–1,400 rpm
Speed accuracy	±5 %	±2 %
Drive	Shaded pole motor	EC-motor
Operating mode	Continuous operation	Continuous operation
Display	–	–
Analogue / digital interface	–	–
Heating power	–	–
Hotplate temperature range	–	–
Max. medium temperature range	–	–
Accuracy temperature setting	–	–
Sensor port	–	–
Control accuracy with sensor in the medium	–	–
Sensor breakage protection	–	–
Heating control	–	–
Control accuracy hotplate	–	–
Residual heat indicator	–	–
Safety cut-out hotplate	–	–
Timer	–	–
Max. stirring capacity **H_2O**	5 l	20 l
Max. load	6 kg	25 kg
Power input	7 W	20 W
Diameter top plate **Ø**	104 mm	145 mm
Top plate material	PVDF	Kera-Disk® aluminium alloy, coated
Weight	1.1 kg	2.9 kg
Dimensions **w / d / h**	140×126×80 mm	173×277×94 mm
Permissible ambient conditions	5–31 °C at 80 % rel. humidity, 32–40 °C decreasing linearly up to max. 50 % rel. humidity	5–31 °C at 80 % rel. humidity, 32–40 °C decreasing linearly up to max. 50 % rel. humidity
Protection class **DIN EN 60529**	IP 21	IP 32

Standard supply voltage: 230 V. Other supply voltages upon request.

Technical Specifications

Magnetic stirrers with heating function

Hei-Standard	Hei-Tec	Hei-Connect
100–1,400 rpm	100–1,400 rpm	100–1,400 rpm
±2 %	±2 %	±2 %
EC-motor	EC-motor	EC-motor
Continuous operation	Continuous operation	Continuous operation
–	digital	digital
–	–	digital (RS 232)
800 W	800 W	800 W
20–300 °C	20–300 °C	20–300 °C
250 °C	250 °C	250 °C
–	±1 °C	±1 °C
Pt 1000	Pt 1000	Pt 1000
–	±1 °C	±1 °C
with PT 1000	with PT 1000	with PT 1000
Micro controller	Micro controller	Micro controller
±5 °C	±5 °C	±5 °C
yes	yes	yes
25 °C via hotplate temperature	25 °C via hotplate temperature	25 °C via hotplate temperature
–	–	yes
20 l	20 l	20 l
25 kg	25 kg	25 kg
825 W	825 W	825 W
145 mm	145 mm	145 mm
Kera-Disk® aluminium alloy, coated	Kera-Disk® aluminium alloy, coated	Kera-Disk® aluminium alloy, coated
2.9 kg	2.9 kg	2.9 kg
173×277×94 mm	173×277×94 mm	173×277×94 mm
5–31 °C at 80 % rel. humidity, 32–40 °C decreasing linearly up to max. 50 % rel. humidity	5–31 °C at 80 % rel. humidity, 32–40 °C decreasing linearly up to max. 50 % rel. humidity	5–31 °C at 80 % rel. humidity, 32–40 °C decreasing linearly up to max. 50 % rel. humidity
IP 32	IP 32	IP 32

Standard supply voltage: 230 V. Other supply voltages upon request.

Accessories

Heating Bath

1 l	PTFE coated	504-93100-00
2 l	PTFE coated	504-92100-00
4 l	PTFE coated	504-91100-00

Heating Bath for Oil

1 l	max. temperature 250 °C	504-93000-00
2 l	max. temperature 250 °C	504-92000-00
4 l	max. temperature 250 °C	504-91000-00

Calotte Attachment

For 1-l round bottom flasks 504-94000-00

Silicone Protective Cover

Protects your magnetic stirrer against splashes and dripping water

For Hei-Tec, Hei-Connect	23-07-06-05-59
For Hei-Standard, Hei-Mix L	23-07-06-05-63

Stirring Bars

Cylindrical shape 25, 40, 50 mm	1 piece each	509-56000-00
Cross shape 16.5 mm For flasks 25 – 50 ml	Pack of 20 pcs.	509-58500-00
Evaluation kit Cross shape, oval, elliptic	Pack of 10 pcs.	509-58300-00
Oval shape 15 × 6 mm For flasks 10 ml	Pack of 3 pcs.	509-53000-00
Oval shape 25 × 10 mm For flasks 25 – 50 ml	Pack of 3 pcs.	509-54000-00
Oval shape 30 × 10 mm For flasks 100 – 250 ml	Pack of 3 pcs.	509-55000-00

Temperature Sensor Pt 1000

For Hei-Tec, Hei-Connect

V4A (AISI 316L)
P/N 509-67910-00

Glass-coated
P/N 509-67920-00

Holding Device

For safe and space-saving attachment to lattice walls; one clamp is included in the scope of delivery

P/N 509-96000-00

Pt 1000 Clamping System

Includes support rod and attachment with cable inlet

P/N 509-63100-00

Pt 1000 clamping system for bath attachments 3 – 5 l
Includes support rod and attachment with cable inlet

P/N 509-63200-00

RS 232 Cable

9-pin, for Hei-Connect and Hei-TORQUE Precision models

P/N 14-007-040-72

Heating Bath Liquid

Heating bath liquid up to 220 °C (5 kg)

P/N 569-00600-00

Heat-On Blocks

Safe, fast and efficient

Replace oil baths and jacket heaters in your lab and reduce the risk of fire.
Heat-On blocks are by far the safest, fastest and most efficient method for heating and mixing solutions in round bottom flasks from 10 ml to 5 l.

Highest Level of Safety

Increased occupational safety and fire protection: The elimination of oil baths prevents accidents, fires and contamination. The unique design prevents glass breakage and thus minimizes the risk of possible cutting injuries and leaking liquids. The high temperature accuracy offers maximum safety for applications up to 260 °C.

Superior Ease of Use

The temperature can be measured conveniently and precisely in the medium or directly at the reaction attachment. No oil is required as a heat conductor, as the attachments snugly enclose the flasks. The cleaning effort is minimized. The PTFE coating offers the highest resistance to chemicals and correspondingly many years of use.

Lasting Reduction of Cost of Ownership

The simplified handling minimizes process times and increases sample throughput: 150 ml of water are brought to the boil in less than 11 minutes. In addition, the 66 % faster heating times compared to conventional oil baths save on energy costs.

Flask size	Liquid capacity	Hotplate temperature	Time to boiling point
10 ml	6 ml	300 °C	6.8 min
25 ml	15 ml	300 °C	8.0 min
50 ml	30 ml	300 °C	8.5 min
100 ml	60 ml	300 °C	8.8 min
150 ml	100 ml	300 °C	10.0 min
250 ml	150 ml	300 °C	10.8 min
500 ml	300 ml	300 °C	16.4 min
1,000 ml	600 ml	300 °C	21.1 min
2,000 ml	1,200 ml	300 °C	35.1 min
3,000 ml	1,800 ml	300 °C	47.3 min
4,000 ml	2,400 ml	300 °C	51.0 min
5,000 ml	3,000 ml	300 °C	75.5 min

Heat-On Attachments

Heat-On Blocks

Block with lateral flask cut-outs	100 ml	505-80066-00
Block	250 ml	505-80067-00
Block with lateral flask cut-outs	250 ml	505-80067-01
Block	500 ml	505-80069-00
Block	1 l	505-80071-00
Block	2 l	505-80073-00
Block	3 l	505-80075-00
Block	4 l	505-80078-00
Block	5 l	505-80076-00

Heat-On Accessories

Pt 1000 clamping system for bath attachments 3 – 5 l	509-63200-00
Retort clamp	505-81075-00
Boss head	570-31100-00
Flask stand & clamp kit (Support rod and attachment with cable inlet, retort clamp, boss head)	505-81400-00

Multi-Well Holder and Inserts

Heat-On insert	10 ml	505-80061-00
Heat-On insert	25 ml	505-80062-00
Heat-On insert	50 ml	505-80063-00
Heat-On insert	100 ml	505-80064-00
Heat-On insert	150 ml	505-80065-00
Heat-On Multi-Well holder		505-80060-00
Safety lifting handles		505-80077-00

Safety Covers

For Heat-On Multi-Well holder	505-80080-00
For Heat-On 200–300-ml block	505-80081-00
For Heat-On 500-ml block	505-80082-00
For Heat-On 1-l block	505-80083-00

Heat-On Multi-Well Packages

Package Heat-On Multi-Well Basic Includes 1 Multi-Well holder and 3 inserts (for 25-ml, 50-ml and 100-ml flasks)	505-81300-00
Package Heat-On Multi-Well Includes 1 Multi-Well holder and 6 inserts (2 each for 25-ml, 50-ml and 100-ml flasks)	505-81200-00

StarFish Workstations

Processing numerous reactions on a small footprint at significantly reduced process times

- Numerous attachments turn your magnetic stirrer into a multiple, efficiency-increasing reaction station for up to 45 samples simultaneously
- Versatile all-rounder
- Countless possibilities: From simple heating and stirring tasks to concentrations and extractions with vacuum and inert gas
- No need to purchase new glass components. Simply work with the existing round bottom flasks and combine them with the matching StarFish attachments
- MonoBlocks and PolyBlocks offer combination possibilities of up to five individual PolyBlocks in different sizes or one MonoBlock with uniform insert sizes

StarFish Workstations are ideal for Soxhlet applications.

MonoBlocks and PolyBlocks offer combination possibilities of up to five individual PolyBlocks in different sizes or one MonoBlock with uniform insert sizes.

StarFish Accessories

Base Plate

The base plate fits securely on the magnetic stirrer hotplate and guarantees a good contact with the heated surface.

StarFish base plate	145 mm Ø	505-81000-00
StarFish safety handles	Pack of 2 pcs.	505-81001-00

MonoBlocks

MonoBlocks consist of one block with several inserts of the same size and are ideal for applications with identical vessels.

MonoBlock for flasks	5 × 250 ml	505-80001-00
Flask insert	150 ml	505-80040-00
Flask insert	100 ml	505-80041-00
Flask insert	50 ml	505-80042-00
Flask insert	25 ml	505-80043-00
Flask insert	10 ml	505-80044-00
Flask insert	5 ml	505-80045-00
MonoBlock for test tubes	16 × 25 mm Ø	505-80002-00
MonoBlock for test tubes	16 × 24 mm Ø	505-80003-00
MonoBlock for test tubes	40 × 16 mm Ø	505-80004-00
MonoBlock for test tubes	40 × 12 mm Ø	505-80005-00
MonoBlock for cylindrical test tubes	16 × 28 mm Ø	505-80006-00
MonoBlock for cylindrical test tubes	20 × 21 mm Ø	505-80007-00
MonoBlock for cylindrical test tubes	40 × 17 mm Ø	505-80008-00
MonoBlock for cylindrical test tubes	40 × 15 mm Ø	505-80009-00
MonoBlock for cylindrical test tubes	40 × 12 mm Ø	505-80010-00

PolyBlocks

PolyBlocks consist of narrow segments (five per base plate) that can be combined to suit different vessel sizes; ideal for use with different vessel types and sizes.

PolyBlock for test tubes	1 × 250 ml	505-80020-00
PolyBlock for test tubes	3 × 25 ml	505-80021-00
PolyBlock for test tubes	3 × 24 ml	505-80022-00
PolyBlock for test tubes	9 × 16 ml	505-80023-00
PolyBlock for test tubes	9 × 12 ml	505-80024-00
PolyBlock for test tubes	3 × 28 ml	505-80025-00
PolyBlock for test tubes	3 × 21 ml	505-80026-00
PolyBlock for test tubes	7 × 17 ml	505-80027-00
PolyBlock for test tubes	9 × 15 ml	505-80028-00
PolyBlock for test tubes	9 × 12 ml	505-80029-00

StarFish Accessories

Universal 5-way Clamps

The StarFish clamp allows the attachment of glassware in different sizes and is optionally available with silicone or velcro strap.

Each clamp consists of five telescope arms, which can be extended as required and thus securely attached around the vessel neck. Application example for the use of both clamps: The silicone strap holds the tubes securely in place; if necessary, the samples can be lifted with a handle, while the velcro strap allows the condenser to slide through.

5-way clamp with velcro strap	505-81010-00
5-way clamp with silicone strap and handle	505-81020-00

Water-Distribution Manifold

Distributes water evenly from one output source to up to five condensers.

Two water multi-distributors are always used in the set-up. One is for distributing the water and a second one for collecting the water again. The water can then either be reused or discharged completely. Each of the five connections is equipped with a leak-proof shut-off valve.

Water manifold with connector	505-81030-00

Gas / Vacuum-Distribution Manifold

Distributes inert gas or vacuum evenly from one output source to up to five different stations or vessels. Regulating the gas or vacuum is not possible. Each of the five connections is equipped with a leak-proof shut-off valve.

Gas / Water Manifold with connector			505-81040-00
Replacement self-adhesive velcro pads	200 mm	(pack of 10 pcs.)	505-81070-00
Replacement velcro loop strips	200 mm	(pack of 5 pcs.)	505-81080-00
Replacement spare silicone strips	200 mm	(pack of 5 pcs.)	505-81090-00
Support rod	650 mm		505-81050-00
Support split rod	650 mm		505-81060-00

WARNING
Important information for California residents regarding Prop 65.
Please visit **www.P65warnings.ca.gov** for more information.

Imprint

Publisher:
Heidolph Instruments GmbH & Co. KG
Walpersdorfer Straße 12, D – 91126 Schwabach

Edition: 02/2020

Discover our rotary evaporators at
www.heidolph.com

2020-07

Heidolph Instruments GmbH & Co. KG
Walpersdorfer Str. 12 • 91126 Schwabach
Phone: +49 9122 9920-19
Fax: +49 9122 9920-65
E-Mail: sales@heidolph.de

heidolph
research made easy