

Premium Laboratory Equipment

Laboratory and Magnetic Stirrers

Gentle but powerful



Hei-PLATE Magnetic Stirrer

Homogenous Stirring

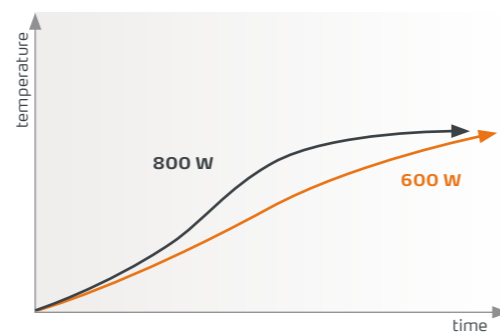
The sturdy magnetic stirrers of the Hei-PLATE series were developed to mix low-viscosity liquids – from gentle to intensive – in an optimal way. They are ideally suited for homogenizing organic and inorganic substances. The premium devices offer maximum safety and optimum ease of use. 800 W heating power (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





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

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



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

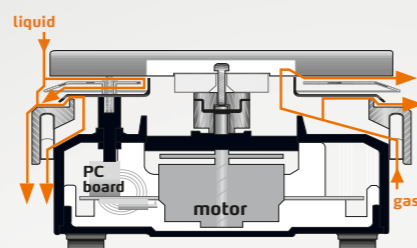
The high heating power of 800 Watt enables 35% faster heating times compared to conventional magnetic stirrers with 600 Watt.

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 $\pm 2\%$ 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 $\pm 2\%$ 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 $\pm 2\%$ 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/AISI 316L)
- 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/AISI 316L)
- 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/AISI 316L)
- 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 greener 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

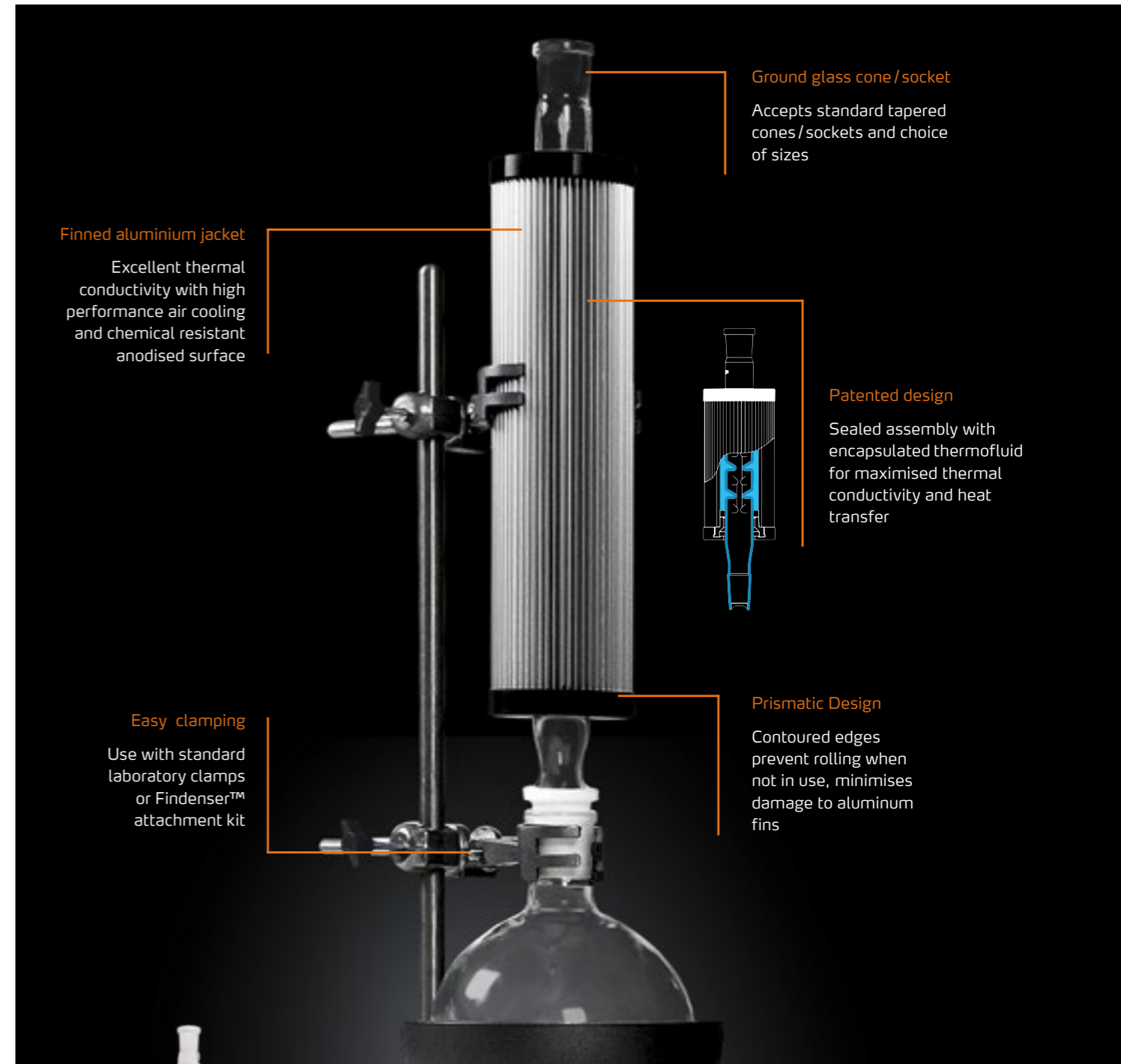
Superior Ease of Use

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



Finned aluminium jacket
Excellent thermal conductivity with high performance air cooling and chemical resistant anodised surface

Ground glass cone/socket
Accepts standard tapered cones/sockets and choice of sizes

Patented design
Sealed assembly with encapsulated thermofluid for maximised thermal conductivity and heat transfer

Prismatic Design
Contoured edges prevent rolling when not in use, minimises damage to aluminum fins

Easy clamping
Use with standard laboratory clamps or Findenser™ attachment kit



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

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	H₂O 5 l	20 l
Max. load	6 kg	25 kg
Power input	7 W	20 W
Diameter top plate	∅ 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

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



Heating Bath for Oil

1l	max. temperature 250 °C	504-93000-00
2l	max. temperature 250 °C	504-92000-00
4l	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 5L.

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	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	505-80002-00
MonoBlock for test tubes	16 × 24 mm	505-80003-00
MonoBlock for test tubes	40 × 16 mm	505-80004-00
MonoBlock for test tubes	40 × 12 mm	505-80005-00
MonoBlock for cylindrical test tubes	16 × 28 mm	505-80006-00
MonoBlock for cylindrical test tubes	20 × 21 mm	505-80007-00
MonoBlock for cylindrical test tubes	40 × 17 mm	505-80008-00
MonoBlock for cylindrical test tubes	40 × 15 mm	505-80009-00
MonoBlock for cylindrical test tubes	40 × 12 mm	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

Imprint

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

Edition: 02/2019

© Copyright 2019, Heidolph Instruments GmbH & Co. KG
 The reproduction of information or data requires our prior consent.

Illustrations may show accessories and decorative items that are not included in the scope of delivery. Technical changes & errors reserved.



WARNING

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