

# Heidolph Benchtop Chemistry Solutions

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Product	P/N
Hei-VAP Core Hand Lift (HL) G1	036040050
Hei-VAP Core Hand Lift (HL) G3	036040051
Hei-VAP Core Hand Lift (HL) G3 XL	036040052
Hei-VAP Core Hand Lift (HL) G5	036040053
Hei-VAP Core Hand Lift (HL) G6	036040054
Hei-VAP Core Hand Lift (HL) G1B	036040055
Hei-VAP Core Hand Lift (HL) G3B	036040056
Hei-VAP Core Hand Lift (HL) G3B XL	036040057
Hei-VAP Core Hand Lift (HL) G5B	036040058
Hei-VAP Core Hand Lift (HL) G6B	036040059
Hei-VAP Core Motor Lift (ML) G1	036040060
Hei-VAP Core Motor Lift (ML) G3	036040061
Hei-VAP Core Motor Lift (ML) G3 XL	036040062
Hei-VAP Core Motor Lift (ML) G5	036040063
Hei-VAP Core Motor Lift (ML) G6	036040064
Hei-VAP Core Motor Lift (ML) G1B	036040065
Hei-VAP Core Motor Lift (ML) G3B	036040066
Hei-VAP Core Motor Lift (ML) G3B XL	036040067
Hei-VAP Core Motor Lift (ML) G5B	036040068
Hei-VAP Core Motor Lift (ML) G6B	036040069
Hei-VAP Expert Hand Lift (HL) G1	036041000
Hei-VAP Expert Hand Lift (HL) G3	036041001
Hei-VAP Expert Hand Lift (HL) G3 XL	036041002
Hei-VAP Expert Hand Lift (HL) G5	036041003
Hei-VAP Expert Hand Lift (HL) G6	036041004
Hei-VAP Expert Hand Lift (HL) G1B	036041005
Hei-VAP Expert Hand Lift (HL) G3B	036041006
Hei-VAP Expert Hand Lift (HL) G3B XL	036041007
Hei-VAP Expert Hand Lift (HL) G5B	036041008
Hei-VAP Expert Hand Lift (HL) G6B	036041009
Hei-VAP Expert Motor Lift (ML) G1	036041010
Hei-VAP Expert Motor Lift (ML) G3	036041011
Hei-VAP Expert Motor Lift (ML) G3 XL	036041012

Product	P/N
Hei-VAP Expert Motor Lift (ML) G5	036041013
Hei-VAP Expert Motor Lift (ML) G6	036041014
Hei-VAP Expert Motor Lift (ML) G1B	036041015
Hei-VAP Expert Motor Lift (ML) G3B	036041016
Hei-VAP Expert Motor Lift (ML) G3B XL	036041017
Hei-VAP Expert Motor Lift (ML) G5B	036041018
Hei-VAP Expert Motor Lift (ML) G6B	036041019
Hei-VAP Expert Control Hand Lift (HL) G1	036041020
Hei-VAP Expert Control Hand Lift (HL) G3	036041021
Hei-VAP Expert Control Hand Lift (HL) G3 XL	036041022
Hei-VAP Expert Control Hand Lift (HL) G5	036041023
Hei-VAP Expert Control Hand Lift (HL) G6	036041024
Hei-VAP Expert Control Hand Lift (HL) G1B	036041025
Hei-VAP Expert Control Hand Lift (HL) G3B	036041026
Hei-VAP Expert Control Hand Lift (HL) G3B XL	036041027
Hei-VAP Expert Control Hand Lift (HL) G5B	036041028
Hei-VAP Expert Control Hand Lift (HL) G6B	036041029
Hei-VAP Expert Control Motor Lift (ML) G1	036041030
Hei-VAP Expert Control Motor Lift (ML) G3	036041031
Hei-VAP Expert Control Motor Lift (ML) G3 XL	036041032
Hei-VAP Expert Control Motor Lift (ML) G5	036041033
Hei-VAP Expert Control Motor Lift (ML) G6	036041034
Hei-VAP Expert Control Motor Lift (ML) G1B	036041035
Hei-VAP Expert Control Motor Lift (ML) G3B	036041036
Hei-VAP Expert Control Motor Lift (ML) G3B XL	036041037
Hei-VAP Expert Control Motor Lift (ML) G5B	036041038
Hei-VAP Expert Control Motor Lift (ML) G6B	036041039
Hei-VAP Ultimate Hand Lift (HL) G1	036041040
Hei-VAP Ultimate Hand Lift (HL) G3	036041041
Hei-VAP Ultimate Hand Lift (HL) G3 XL	036041042
Hei-VAP Ultimate Hand Lift (HL) G5	036041043
Hei-VAP Ultimate Hand Lift (HL) G6	036041044
Hei-VAP Ultimate Hand Lift (HL) G1B	036041045





**PREMIUM EQUIPMENT | INSTALLATION & TRAINING | 3 YEAR WARRANTY**

Heidolph North America's goal is to give our customers the ability to focus on their research. Accomplishing this is done largely in part by providing best in class service and support for solution oriented equipment. Heidolph specializes in both benchtop and industrial rotary evaporation, making distillation more efficient, and in turn allowing the researcher's focus to be their research.

Heidolph's product lineup includes a full range of chemistry and biology tools designed to increase lab productivity, including but not limited to overhead stirrers, magnetic stirring hotplates and shakers.

Quality without compromise is Heidolph's commitment to you. All Heidolph equipment is designed and made in Germany, backed by a 3 year warranty, and carries an average 10 year lifespan; making it a worth while investment.







# HEI-VAP

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## ROTARY EVAPORATORS

The rotary evaporators of our Hei-VAP series create new milestones within vacuum evaporation - a well-designed concept, unmatched tightness and uncompromising high quality.

A variety of additional options make the Heidolph rotary evaporator the best solution for your individual requirements. You can reach up to 40% higher evaporation rates with our new XL condensers and achieve the purest results through our innovative seal system, which enables a stable evaporation process and therefore overcomes any pharmaceutical or chemical challenge.



# HEI-VAP

The Hei-VAP Series of rotary evaporators was developed with an emphasis on the essentials: well thought-out details with a focus on features and functions to facilitate everyday laboratory work.

- The PTFE vacuum seals are highly resistant and can achieve maximum tightness and reduce expensive spare parts.
- The 210°C universal heating bath is suitable for all flasks up to 5 liters.
- Conveniently adjust the angle of inclination between 20° and 80° with a maximum height of 160mm.
- Corrosion free die cast housing with condensation repellent varnish.





# POWERFUL GERMAN ENGINEERING

## Benefits at a Glance



The design of the XL condenser allows you to achieve up to 40% higher evaporation rates.



Integrated solvent library with pre-loaded settings to optimize your process.



Operating panel is detachable allowing for operation outside a closed fume hood.



Two independent safety circuits avoid an overheat situation of your heating bath.



Our Easy-Clip is made out of highly resistant synthetic material which ensures a long life performance.



The patented clamping sleeve allows for easy removal and will eliminate the risk of becoming stuck or broken.



Universal heating bath is isolated and double walled to prevent heat loss and burns.



The Hei-VAP Series has been tested and certified by OSHA's National Recognized Testing Laboratory (NRTL) Program. The certification states that the product complies with the requirements of one or more appropriate product safety test standards.

# The Hei-VAP Series – One Concept for all Requirements

## STANDARD MODELS

Without vacuum control. For intergration into an exisiting vacuum system or for configuration with optional vacuum controler.



### Hei-VAP Core

- Digital display
- Direct access to rotation and heating bath temperature
- Lock function
- Standby button
- Residual heat warning



### Hei-VAP Expert

- 5" touch display
- Clear display of all values (Basic/Advanced modes)
- Timer
- Max. temperature limitation
- Multilingual menu with text warnings
- Optional display of vapor temperature
- USB and Micro SD interfaces



### Hei-VAP Ultimate

- 7" touch display
- Clear display of all values (Basic/Advanced modes)
- Timer
- Max. temperature limitation
- Multilingual menu with text alerts
- Optional display of vapor temperature
- USB and Micro SD plus LAN/RS 232 interfaces (Lab 4.0 ready)

## CONTROL MODELS

Including the smart Control-Box. For controlling any connected vacuum sources and the Heidolph chillers directly via the rotary evaporator's operating panel.



### Hei-VAP Expert Control

Extends the functions of the Hei-VAP Expert by:

- Control of any vacuum sources and Heidolph recirculation chillers
- Solvent library
- Favorites memory
- Dynamic AUTOaccurate (DAA)
- Ramp programming



### Hei-VAP Ultimate Control

Extends the functions of the Hei-VAP Ultimate by:

- Control of any vacuum sources and Heidolph recirculation chillers
- Solvent library
- Favorites memory
- Dynamic AUTOaccurate (DAA)
- Ramp programming

# The Hei-VAP Control Principle

Hei-VAP Expert Control and Ultimate Control allow to centrally control all process parameters: vacuum, cooling temperature, rotation and heating bath temperature.



## Evaporation at Your Fingers:

- Customizable Solvent Library
- Automatically find boiling points with Dynamic AUTOaccurate
- Simply save processes as favorites

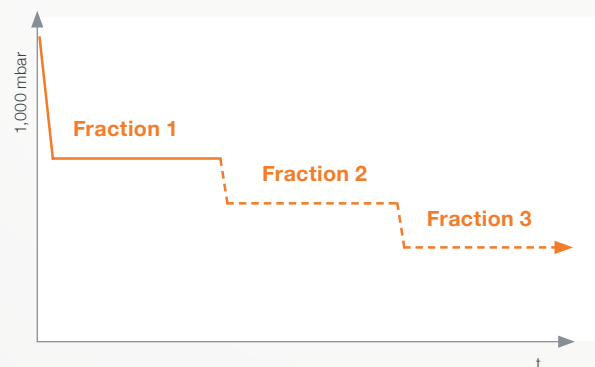
## Hei-VAP Expert Control Hei-VAP Ultimate Control

\* A subsequent upgrade is possible: simply connect the "plug-and-play" Control-Box and enjoy all the benefits.

# Save time with the automated process control

## Automatic evaporation with Dynamic AUTO<sub>accurate</sub> (DAA)

- The boiling points of one or more fractions are identified through the steam temperature gradation of the mixture during continuous automatic pressure control
- You can freely set whether one or more fractions are to be distilled. The vacuum control is fully automated for each fraction
- You can control the evaporation speed by adjusting the ratio of steam temperature to cooling temperature



The DAA allows you to start a fully automated distillation process already during the heat-up phase of the heating bath. The system vacuum is dynamically adjusted to the changing heating bath temperatures until the heating bath has reached its defined temperature.

- Samples are distilled precisely
- Automation with sensors ensures noticeably higher precision
- To protect your sample, motor lift models automatically remove the evaporating flask from the heating bath at the end of the process

### System requirements:

The automatic process control requires a Hei-VAP Expert Control or Hei-VAP Ultimate Control model with the AUTOaccurate-sensor as well as the configuration with compatible glassware (G3, G3 XL or G6).



## FAVORITES & RAMPS

- Solvent library with pre-set, customizable processes and solvents. Can be saved as a favorite at any time, also directly on the start screen
- Evaporate with a tap: the smart DAA program
- Individual settings: adjust hysteresis (from gentle to highest performance), limit max. pressure or temperature, multilingual menu with format settings, various calibrations, assign heating temperature or vacuum to right knob



# TECHNICAL SPECIFICATIONS

## Rotary Evaporators

Model	Hei-VAP Core (HL)	Hei-VAP Core (ML)
Lift	hand lift	motor lift
Height adjustment speed	manual	30 mm/s
Height adjustment	155 mm	155 mm
Rotation speed	10–280 rpm	10–280 rpm
Rotation speed setting	3.5" LCD display	3.5" LCD display
Drive	brushless DC motor with electronic speed control	
Heating capacity	1,300 W	1,300 W
Temp. range heating bath	20–210 °C	20–210 °C
Temperature accuracy bath	±1 °C	±1 °C
Overheat protection bath	cut-off at 5 °C over set temperature via separate Pt 1000	
Secondary overtemp. cut-off	250 °C	250 °C
Bath temperature setting	3.5" LCD display	3.5" LCD display
Heating bath temperature control	electronic/digital	electronic/digital
Material heating bath	stainless steel AISI 316 L	stainless steel AISI 316 L
Diameter heating bath	255 mm	255 mm
Volume heating bath	4.5 l	4.5 l
Max. size evaporating flask	5 l	5 l
Display vapor temperature required accessories	–	–
Integrated vacuum controller	–	–
Integrated Hei-CHILL controller	–	–
Timer	–	–
Vacuum program DAA mode requires AUTO <sub>accurate</sub> -Sensor	–	–
Programmable ramps	–	–
Supply power	1,400 W	1,400 W
Weight w/o glassware assembly	16 kg	16 kg
Dimensions with glassware set G3 max. w/d/h	739 × 477 × 845 mm	739 × 477 × 845 mm
Dimensions with glassware set G3 XL max. w/d/h	739 × 477 × 920 mm	739 × 477 × 920 mm
Condensing surface	1,400 cm <sup>2</sup>	1,400 cm <sup>2</sup>
Condensing surface XL condenser	2,200 cm <sup>2</sup>	2,200 cm <sup>2</sup>
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 <sup>1</sup>	DIN EN 60529 IP 20	IP 20

Standard supply voltage: 230 V. Other voltages upon request, please specify for order.

<sup>1</sup> IP 67 for heating bath cable connections, IP 42 for operating panels and Control-Box

**Hei-VAP Expert  
(HL/ML)**

hand lift/motor lift

manual /30 mm/s

155 mm

10–280 rpm

5" LCD color graphic display

**Hei-VAP Ultimate  
(HL/ML)**

hand lift/motor lift

manual /30 mm/s

155 mm

10–280 rpm

7" LCD color graphic display

**Hei-VAP Expert Control  
(HL/ML)**

hand lift/motor lift

manual /30 mm/s

155 mm

10–280 rpm

5" LCD color graphic display

**Hei-VAP Ultimate Control  
(HL/ML)**

hand lift/motor lift

manual /30 mm/s

155 mm

10–280 rpm

7" LCD color graphic display

brushless DC motor with electronic speed control

1,300 W

1,300 W

1,300 W

1,300 W

20–210 °C

20–210 °C

20–210 °C

20–210 °C

±1 °C

±1 °C

±1 °C

±1 °C

cut-off at 5 °C over set temperature via separate Pt 1000

250 °C

250 °C

250 °C

250 °C

5" LCD color graphic display

7" LCD color graphic display

5" LCD color graphic display

7" LCD color graphic display

electronic/digital

electronic/digital

electronic/digital

electronic/digital

stainless steel AISI 316 L

stainless steel AISI 316 L

stainless steel AISI 316 L

stainless steel AISI 316 L

255 mm

255 mm

255 mm

255 mm

4.5 l

4.5 l

4.5 l

4.5 l

5 l

5 l

5 l

5 l

yes  
vapor temperature sensoryes  
vapor temperature sensoryes  
vapor temperature sensoryes  
vapor temperature sensor

–

–

yes

yes

–

–

yes

yes

yes

yes

yes

yes

–

–

yes

yes

yes

yes

yes

yes

1,400 W

1,400 W

1,400 W

1,400 W

16 kg

16 kg

16 kg

16 kg

739 × 477 × 845 mm

739 × 477 × 845 mm

739 × 477 × 845 mm

739 × 477 × 845 mm

739 × 477 × 920 mm

739 × 477 × 920 mm

739 × 477 × 920 mm

739 × 477 × 920 mm

1,400 cm<sup>2</sup>1,400 cm<sup>2</sup>1,400 cm<sup>2</sup>1,400 cm<sup>2</sup>2,200 cm<sup>2</sup>2,200 cm<sup>2</sup>2,200 cm<sup>2</sup>2,200 cm<sup>2</sup>5–31 °C at 80 % rel. humidity,  
32–40 °C decreasing linearly  
up to max. 50 % rel. humidity5–31 °C at 80 % rel. humidity,  
32–40 °C decreasing linearly  
up to max. 50 % rel. humidity5–31 °C at 80 % rel. humidity,  
32–40 °C decreasing linearly up to  
max. 50 % rel. humidity5–31 °C at 80 % rel. humidity,  
32–40 °C decreasing linearly up to  
max. 50 % rel. humidity

IP 20

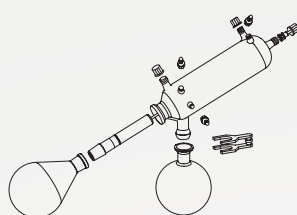
IP 20

IP 20

IP 20

# GLASSWARE

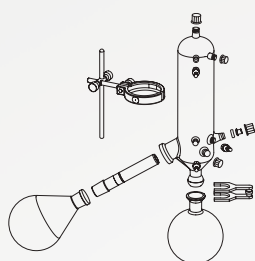
- Glassware set includes one 1,000ml evaporating flask and one 1,000ml receiving flask
- Evaporating flasks and vapor tube come standard with 29/32 joint size and are also available with 24/29 ground joints
- Ventilation cap without ground joints for easy handling and grease-free operation included
- A venting valve with refill function is optionally available
- G3/G3 XL or G6 glassware required for using DAA on Hei-VAP Expert/Ultimate Control models
- All glassware also available with transparent plastic coating (for temperature ranges up to max. 80 °C)



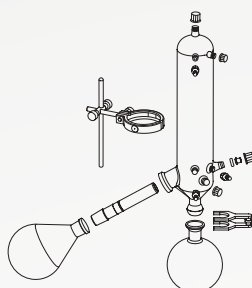
G1

## Glassware set G1

Diagonal condenser for all standard distillations; the option with the most affordable price



G3



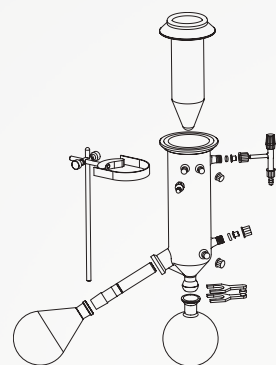
G3 XL

## Glassware set G3

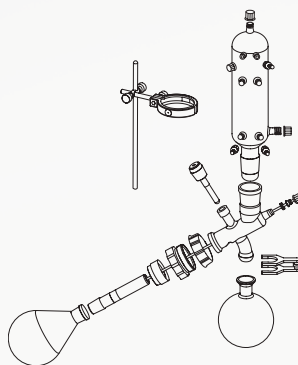
Vertical condenser for all standard distillations; the option with the smallest space requirements

## Glassware set G3 XL

Up to 40 % higher evaporation rate thanks to 2,200 cm<sup>2</sup> of cooling surface



G5



G6

## Glassware set G5

Dry ice condenser for low-boiling solvents

## Glassware set G6

Vertical condenser; centerpiece with valve for reflux distillation

Evaporation rate <sup>1</sup>	Toluene	Acetone	Ethanol	Isopropanol	Water
G3 Vertical	6.5 l/h	6.0 l/h	2.5 l/h	4.0 l/h	1.4 l/h
G3 XL-Vertical	8.5 l/h	7.5 l/h	3.5 l/h	4.9 l/h	1.4 l/h
Improvement with XL-Condenser	31 %	25 %	40 %	23 %	system limit reached with 1.4 l/h

<sup>1</sup> With maximum condenser efficiency

# ACCESSORIES



## Evaporating flask

50 ml  
100 ml  
250 ml  
500 ml  
1,000 ml  
2,000 ml  
3,000 ml  
5,000 ml

### NS 24/40

036302270  
036302290  
036302310  
036302330  
036301160  
036302370  
036302390  
036305000



## Powder flask

500 ml  
1,000 ml  
2,000 ml

### NS 24/40

036302210  
036302230  
036302250



## Spider NS 14.5

With 6 distillation sleeves 20 ml  
With 12 distillation sleeves 20 ml  
With 20 distillation sleeves 20 ml

### NS 24/40

036302610  
036302630  
036302650



## Spider NS 24

With 5 flasks à 50 ml  
With 5 flasks à 100 ml

### NS 24/40

036302750  
036302770



## Evaporating Cylinder

500 ml  
1,500 ml

### NS 24/40

036302410  
036302430



## Foam Brake

Foam brake with flask clamp

### NS 24/40

036302470



## Receiving flask

100 ml  
250 ml  
500 ml  
1,000 ml  
2,000 ml  
3,000 ml

### standard

036302480  
036302500  
036302520  
036301170  
036302570  
036302590

### coated

036302490  
036302510  
036302530  
036301180  
036302580  
036302600

# ACCESSORIES



## Guard Hood

Strong and transparent guard hood to protect from implosions; provides easy and immediate access to flask and bath; application range up to 130 °C

**PN 036305040**



## Guard Shield

Strong and transparent guard shield to protect from implosions; provides easy and immediate access to flask and bath

**PN 036305050**



## Aqua-Stop

Automatically stops the water supply as soon as the rotary evaporator is switched off. Prevents excessive water consumption and water damage and also reduces costs

**PN 036302969**



## Spare Vapor Tube

Standard joint size: NS 24/40

**PN 036301110**

## Spare clamping sleeve

**PN 036308030**



## Tubing

Tubing set with 12 m tube and hose clamp for vacuum and water connection

**PN 036302180**

## Tubing by meter (individual length)

**PN 036294800**



## Vacuum Seal PTFE/FFKM

Special PTFE seal (with FFKM sealing ring), highest chemical resistance, long lifespan without abrasion, highest density, FDA-compliant

**PN 036210032**

## Standard PTFE/FFKM spare seal

**PN 036210033**



## Heating Bath Liquid

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

**PN 036300941**



## AUTO<sub>accurate</sub>-Sensor

For Hei-VAP Expert Control and Hei-VAP Ultimate Control. Only in combination with glassware set G3, G3 XL or G6

**PN 036308020**



## Vapor Temperature Sensor

For Hei-VAP Expert and Hei-VAP Ultimate as well as Control models

**PN 036308010**





### Ventilation and Replenishment Valve

Ground-free, for precise refilling during the process. With ventilation function

**PN 036210761**

### Replacement Cap

**PN 036210497**



### Extension Cable

Allows quick and easy operation even outside closed fume hoods, length 1.5 m

**PN 036210769**



### Holding Device

For all Hei-VAP operating panels: can be positioned next to the device or on the wall. Extension cable required

**PN 036210771**



### Woulff Bottle

For separating condensate to protect the valves of the vacuum pump, standard vacuum laboratory bottles can be used. Screw connection for easy emptying and cleaning, compatible with all Hei-VAP configurations, volume of 200 ml

**PN036302940**



### Vacuum Valve

Required for Hei-VAP Control models with valve-controlled vacuum pump. Can be positioned for easy access and cleaning. Not required for manual vacuum control

**PN 036308071**



### Switchbox

#### Connect up to three rotary evaporators to one vacuum pump

If no vacuum is required or when the required vacuum has been reached, the pump is switched off automatically. Prevents excess energy consumption. For applications with different pressure settings, each evaporator must be equipped with vacuum valve and non-return valve. Delivery includes three non-return valves. Suitable only for Hei-VAP Control models

Weight 0.6 kg,  
w/d/h 80 × 45 × 160 mm

**PN 036308080**

Non-Return Valve

**PN 036308002**

## UPGRADE



### Control-Box

Subsequent upgrade for Hei-VAP Expert and Hei-VAP Ultimate models with Control function and the ability to control peripheral devices (vacuum and Hei-CHILL recirculation chiller)

**PN 036000026**

# VACUUM CONTROLLER

## Manual Vacuum Controller

### The cost-effective variant for vacuum control

- Control the house vacuum or any other vacuum source manually
- Pressure range from 0 to 1,020 mbar in 50 mbar increments
- Connection for tubes with 8 mm inner diameter
- Support rod for mounting of the controller on the evaporator included
- A vacuum valve is not required
- W/d/h 80×80×150 mm

P/N 036308000



## Hei-VAC Control

### For accurate vacuum control of house vacuum systems or valve-regulated vacuum pumps

- Entry-level model for digital vacuum control
- Easy installation on the evaporator's condenser shaft or as stand-alone device with base next to the evaporator unit
- Manual vent button to prevent foaming
- Graphs to display the entire vacuum process
- RS 232 interface
- Multilingual menu navigation
- Compatible with all Hei-VAP Evaporators which do not have an integrated vacuum control
- Vacuum controller complete with integrated ceramic diaphragm vacuum sensor, regulation valve and venting valve (control valve included in delivery). Ready for use, with wall power supply and user manual

P/N 036308001

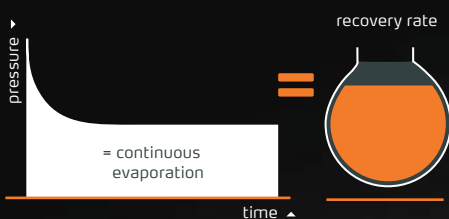
# VACUUM PUMPS

## Valve-Regulated Vacuum Pumps

- All components that come in contact with media are made from chemically resistant fluoropolymer
- The durable PTFE design guarantees a superior diaphragm lifespan
- Head cover and clamping disc have a stable core made from metal that offers unsurpassed long-term performance
- The direct pump drive (without belt) has no wear parts, is exceptionally quiet and creates a very low vibration environment
- The physically optimized gas ballast valve prevents from condensate collecting in the pump



### Fully automatic control with speed adjustment



## RPM-Regulated Vacuum Pumps

- Highest distillation rates possible and reducing process time by 30 %
- Solvent recovery of up to 99 %
- Once the required vacuum is reached, the pump automatically stops and reliably keeps the vacuum at the desired level
- Minimized runtime saves energy and significantly increases the lifespan of the diaphragm
- These pumps guarantee minimum noise and vibrations during operation
- Rpm-regulated pumps achieve the most precise vacuum

# VALVE-REGULATED VACUUM PUMPS



## Rotavac Valve Tec

For all Hei-VAP models

- Recommended for solvents with low or medium boiling points
- Vacuum can be controlled through valves or manual vacuum controllers
- A vacuum valve is necessary if you wish to combine this vacuum pump with Hei-VAP Expert Control/Ultimate Control rotary evaporators

P/N 036304780

## Rotavac Valve Control

For all Hei-VAP models

- Suction capacity for up to three rotary evaporators at the same time
- Vacuum can be controlled through valves or manual vacuum controllers
- Depending on your application, you can use the Switchbox to turn the vacuum pump on and off
- A vacuum valve is required to combine this vacuum pump with Hei-VAP Expert Control/Ultimate Control rotary evaporators

P/N 036302830

## Condenser

P/N 036304900

	Rotavac Valve Tec	Rotavac Valve Control
Diaphragm pump	two-stage	two-stage
Suction capacity	0.75 m³/h	2.0 m³/h
Ultimate vacuum	12 mbar	7 mbar
Combinable with condensor	yes	yes
Power input	80 W	180 W
Weight	6.0 kg	12.8 kg
Dimensions without condenser	w/d/h	
	145 × 315 × 185 mm	195 × 245 × 310 mm

# RPM-REGULATED VACUUM PUMPS



## Rotavac Vario Tec

For Hei-VAP Expert Control/  
Ultimate Control models  
(direct control via rotary  
evaporator)

- Recommended for solvents with low or medium boiling points

P/N 036308100



## Rotavac Vario Control

For Hei-VAP Expert Control/  
Ultimate Control models  
(direct control via rotary  
evaporator)

- Even if the gas ballast valve is open, an excellent ultimate vacuum is reached when working with easily condensable vapors
- This makes distilling high boiling point solvents such as DMF or DMSO possible at low heating bath temperatures

P/N 036308090



## Rotavac Vario Pumping Unit

For Hei-VAP Core models

- Fully adjustable, stand-alone pumping unit including vacuum pump and vacuum controller
- Precise vacuum control prevents bumping and loss of your samples
- Thanks to the automatic vacuum supply to the process parameters, you have more time for important laboratory activities

P/N 036308310

## Condenser

P/N 036308110

	Rotavac Vario Tec	Rotavac Vario Control	Rotavac Vario Pumping Unit
Diaphragm pump	two-stage	three-stage	three-stage
Suction capacity	1.0 m³/h	1.7 m³/h	1.7 m³/h
Ultimate vacuum	12 mbar	2 mbar	5 mbar
Combinable with condensor	yes	yes	yes
Power input	160 W	160 W	160 W
Weight	4.3 kg	5.4 kg	6.0 kg
Dimensions without condenser w/d/h	156 × 236 × 196 mm	167 × 236 × 196 mm	193 × 299 × 299 mm



# RECIRCULATING CHILLERS

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The Hei-CHILL models with cooling capacities from 250 to 1,200 W are specifically designed for reliable continuous operation in the laboratory. The magnetic coupling of the pump and the electric motor prevents leakages.

## Easy to Use

- Clearly arranged control elements, large LED display, membrane keypad and window for monitoring the thermal fluid level
- With a large coolant reservoir to compensate for peak performance during the evaporation process



### Hei-CHILL 250

The compact design fits effortlessly on a laboratory bench, cooling capacity at 250 W. Suitable for ambient temps.

P/N 036306516

### Hei-CHILL 350

The compact design fits effortlessly on a laboratory bench, cooling capacity at 350 W. Suitable for all applications.

P/N 036306517

### Hei-CHILL 600

With rollers for placement under a lab bench, cooling capacity at 600 W. Suitable for XL and water.

P/N 036306518

### Hei-CHILL 1200

With rollers for placement under a lab bench, cooling capacity at 1,200 W. Suitable for 2 to 3 evaporators.

P/N 036306519



## ACCESSORIES



### Kryo 30 Liquid

Non-flammable thermal fluid for Hei-CHILL recirculating chillers, 10 l

P/N 036306513

20 l

P/N 036306507



### RS 232 Cable

To connect a Hei-CHILL to a Hei-VAP Expert Control/Ultimate Control

P/N 036306010

### Enforced cooling tube

For cooling, inside Ø 9 mm, sold by the meter, for operating temps of -20 to +60 °C

P/N 036306512



# TECHNICAL SPECIFICATIONS

## Chillers

	Hei-CHILL 250	Hei-CHILL 350	Hei-CHILL 600	Hei-CHILL 1200
Weight	28 kg	36 kg	52 kg	64 kg
Display	7-segment, LED	7-segment, LED	7-segment, LED	7-segment, LED
Temperature range	−10 – +40 °C	−10 – +40 °C	−10 – +40 °C	−10 – +40 °C
Thermal fluid fill volume	2–4 l	4–7 l	4–8 l	7–14 l
Cooling capacity at +20 °C (20 °C ambient temp.)	250 W	350 W	600 W	1,200 W
Cooling capacity at 0 °C (20 °C ambient temp.)	150 W	200 W	360 W	750 W
Cooling capacity at −10 °C (20 °C ambient temp.)	90 W	120 W	150 W	400 W
Temperature accuracy	±0.5K	±0.5K	±0.5K	±0.5K
Digital interface	RS 232	RS 232	RS 232	RS 232
Noise level	< 70 dB(A)	< 70 dB(A)	< 70 dB(A)	< 70 dB(A)
Ambient temperature range (storage)	5–40 °C	5–40 °C	5–40 °C	5–40 °C
Pump pressure max.	0.35 bar	0.35 bar	1.3 bar	1.3 bar
Pump flow max.	9 l/min	9 l/min	20 l/min	20 l/min
Overvoltage category	II	II	II	II
Alarm output connection	max. 30 V DC, 0.2 A	max. 30 V DC, 0.2 A	max. 30 V DC, 0.2 A	max. 30 V DC, 0.2 A
Contamination level	2	2	2	2
Distance to surroundings (front and rear)	40 cm	40 cm	40 cm	40 cm
Classification according to DIN 12876-1	I/NFL	I/NFL	I/NFL	I/NFL
Refrigerant	R-134a	R-134a	R-134a	R-134a
GWP (100a) according to IPCC IV	1430	1430	1430	1430
Transportation temperature range	−20 – +60 °C	−20 – +60 °C	−20 – +60 °C	−20 – +60 °C
Cooling	Air-cooled	Air-cooled	Air-cooled	Air-cooled
Standard supply voltage	115 V (60 Hz)	115 V (60 Hz)	115 V (60 Hz)	115 V (60 Hz)
Rated power intake (115 V)	230 W	500 W	750 W	1,150 W
Cooling output	250 W	350 W	600 W	1,200 W
Dimensions	w/d/h			
	200 × 375 × 465 mm	240 × 430 × 500 mm	350 × 515 × 590 mm	450 × 585 × 640 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	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 32	IP 32	IP 32

# DESIGNED FOR YOU

## Packages

With the help of one of our specialist, we can create the perfect package that you'll need specifically for your research.



## Packages

### Basic & Academic

## Reccomended Products

Hei-VAP, Rotavac Valve Tec, Manual Vacuum Controller & Tubing Set

### All Around

Hei-VAP, Hei-VAC Control, Rotavac Valve Tec & Tubing Set

### Reaction & Extraction

Hei-VAP, Rotavac Vario Tec, Vapor Temperature Sensor & Tubing Set

### Automatic Evaporation

Hei-VAP, Rotavac Vario Tec, Condenser, Tubing Set, Woulff Bottle & AUTOaccurate Sensor

### University Research

Hei-VAP, Rotavac Vario Control & Tubing Set

### All Around Chill

Hei-VAP, Hei-VAC Control, Rotavac Valve Tec, Hei-CHILL, Tubing Set & Kryo 30

### Academic Chill

Hei-VAP, Rotavac Valve Tec, Manual Vacuum Controller, Hei-CHILL, Tubing Set & Kryo 30

### University Research Chill

Hei-VAP, Rotavac Vario Control, Hei-CHILL, RS 232 Cable, Tubing Set & Kryo 30

# HEI-PLATE

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## MAGNETIC STIRRERS

Even the smallest daily helper should inspire and accompany you for many years. That is the reason for our Magnetic Stirrers to be uncompromising when it comes to quality and reliability. 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 faster heat-up times.

The powerful and extended heating capacity of 600 W reduces process times noticeably. Intelligent functions such as dynamic residual heat indicator, a separate way to activate the heat-function and an independent second safety circuit make the Heidolph Magnetic Stirrer the safest in terms of heating and mixing in your lab.





MR Hei-Connect

rpm  
1400

°C  
92



rpm  
min

°C  
min

heidolph

# HEI-PLATE

The premium devices of the Hei-PLATE Series offer the highest operating safety and comfort standards. 600 W heating capacity and the special Kera-Disk® hotplate with aluminum core allow for minimum heat-up phases that result in cost reductions.

- All units with digital display allow for easy setting and monitoring values on the illuminated readout.
- The strong magnetic field allows for easy stirring of even high viscosity media.
- The unique Kera-Disk® coating is extremely chemical-resistant and scratch-proof, therefore the plate can be cleaned easily from solvents, oil and other contaminations.
- Unit will power off in case of a short circuit, damage to the temperature sensor, a motor failure or other incidences during operation.
- A separate on/off switch for heating prevents unintentional heat-up. If heating is switched on, the on/off button is illuminated for visual control.



# UNCOMPROMISING QUALITY

## Benefits at a Glance



Our Kera-Disk® plate provides:

- Aluminum top plate allows for immediate heat transfer
- Ceramic coating makes the top plate chemical-resistant and scratch-proof.



To protect you from splashes and burns, the rotation speed ramps up slowly.



Heating and hot surface light indicator.



To prevent laboratory fires, the Hei-PLATE includes two independent safety circuits which switch off heating in case of any overtemperature situation.



The Hei-PLATE's fire-resistant aluminum die-cast housing protects against fumes, liquids, vapors and internal corrosion.



The Hei-PLATE Series has been tested and certified by OSHA's National Recognized Testing Laboratory (NRTL) Program. The certification states that the product complies with the requirements of one or more appropriate product safety test standards.

# The Hei-PLATE Series – When Power Meets Safety

## STANDARD MODELS

The premium devices of the Hei-PLATE Series are ideal for decomposing organic and inorganic substances from smooth to intense.



### MR Hei-Standard

The Hei-Standard is for all standard applications. The two separate control knobs give direct access to parameters making it simple to use.

**145mm: 036110519**

**135mm: 036110521**



### MR Hei-Tec

The Hei-Tec has precise control options and device parameter monitoring on the digital display. It can also be connected to a temperature sensor.

**145mm: 036110550**

**135mm: 036110620**

**145mm with PT1000: 036110582**

**135mm with PT1000: 036110583**



### MR Hei-Connect

The Hei-Connect is for precise process documentation. The digital display provides precise control options and device monitoring with the compatibility with the PT 1000 temperature sensor. Includes Hei-Control Software.

**145mm: 036110601**

**135mm: 036110602**

**145mm with PT1000: 036110603**

**135mm with PT1000: 036110604**

## NON-HEATING MODELS

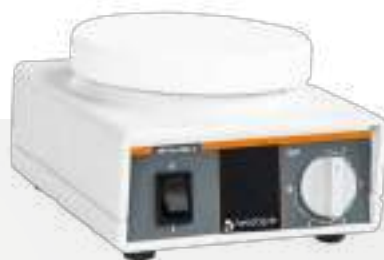
The non-heating models of the Hei-PLATE Series are ideal for gentle stirring in biology and microbiology applications.



### **MR Hei-MIX L**

The Hei-MIX L includes a 145 mm Kera-Disk® top plate and the powerful stirring magnet allows stirring with the volume up to 20 liters. The speed range is from 100 to 1,400 rpm.

**PN 036110465**



### **MR Hei-MIX S**

The Hei-MIX S has a space saving polyamide housing. The white PVDF top plate is perfect for titration and comes with a diameter of 104 mm. The speed range of up to 2,200 rpm is sufficient for applications up to 5 liters.

**PN 036110460**

# ACCESSORIES



## Findenser - Air Condenser

The Findenser is comprised of an internal glass condenser and an external, finned aluminum jacket, with a small amount of water permanently sealed inside. The award winning condenser is designed to replace the need for water cooled condensers.



## Heat-On Blocks

Heat-On Blocks allow you quick and safe personal heating and stirring of your round bottom flasks, without the risks of fire or personal injury and the messy clean up associated with using oil. Sizes up to 5 liters.



## Multi-Well Holders

Multi-Well Holders are designed to hold either one or two inserts for flasks. Inserts are available in sizes 10ml, 25ml, 50ml, 100ml and 150ml.



## Wide Neck Flasks

Choice of flask sizes and styles with a wide neck option. Wide neck flasks allow easier removal of viscous and solid samples an the use of larger stirrer blades.



## Regular Flasks

Various flask sizes available with dropping funnel, a zeotropic, side arm, etc.



## Stir Bars

Rare earth stirring bars in various sizes and shapes provide powerful stirring and a deep vortex.



## Starfish Workstation

The Starfish Multi-Experiment Workstation will save you the time and reduce clutter on your lab bench by performing multiple experiments at the same time.



## MonoBlocks

Monoblocks are single blocks with multiple wells of the same size. Vial sizes up to 500ml.



## PolyBlocks

Polyblocks are small segments which can be mixed to accommodate any combination of vessels, vials, tubes and flasks.





### Manifolds

Allows for coolant, gas or vacuum to be evenly distributed to up to five condensers or vessels. Water-Distribution and Gas/Vacuum Distribution Manifolds available.



### Carousel 12 Plus

The unique patented Carousel simultaneously heats, cools, stirs and reflux multiple samples under an inert atmosphere. Accommodates vessels up to 20 ml.



### Carousel 6 Plus

The Carousel 6 Plus Reaction Station simultaneously heats and stirs up to 6 round bottom flasks. Flexibility is inherent in its design: choose any combination of flask sizes with different side arm combinations and accessories. Accommodates vessels up to 250ml.



### Cooled Carousel 12 Plus

The innovative cooled Carousel 12 Plus reservoir is designed to accept the removable reflux/inerting head from the Carousel 12 Plus allowing for the reaction tubes to be easily and rapidly transferred between heating and cooling bases.



### Cooled Carousel 6 Plus

Simultaneously stir and cool reaction from ambient down to -70°C using up to 6 round bottom flasks. As with the Carousel 6 Plus, you can use any combination of flask sizes.



### Cool-It Cooling Bowls

Cool-It is designed to fit on a stirring hotplate, for controlled stirring through a magnetic stirring bar in the reaction flask. Cooling is obtained by using an appropriate cooling mixture such as dry ice and acetone.



### Storm Heating & Cooling Workstation

Combined with a suitable heating/cooling circulator, the powerful Storm can provide controlled heating and cooling.



### Breeze Heating & Cooling Workstation

The compact Breeze provides rapid controlled heating and cooling from -30° to +165°C; ideal for control by solution temperature.



### Tornado Plus Overhead Stirring Station

The Tornado is a modular add-on for the Carousel 6 Plus, replacing the magnetic stirring of the stirring hotplate with direct stirring from a single overhead stirrer.

# TECHNICAL SPECIFICATIONS

## Magnetic Stirrers

Model	Hei-Mix S	Hei-Mix L
Speed Range	0 - 2,200 rpm	100 - 1400 rpm
Speed Accuracy	±5%	±2%
Drive	Shaded Pole Motor	EC-Motor
Operating Mode	Continuous	Continuous
Display	–	–
Analog/Digital Interface	–	–
Heating Power	–	–
Hotplate Temperature	–	–
Medium Temperature Max	–	–
Accuracy Temperature Setting	–	–
External Temperature Sensor	–	–
Temperature Accuracy with External Temperature Sensor	–	–
Sensor Breakage Protection	–	–
Temperature Control	–	–
Temperature Accuracy Hotplate	–	–
Residual Heat Indicator	–	–
Safety Circuit Hotplate	–	–
Time	–	–
Stirring Capacity Max (H <sub>2</sub> O)	5L	20L
Load Max	6 kg	25 kg
Power Consumption	7 W	20 W
Plate Diameter	104 mm	145 mm
Plate Material	PVDF	Kera-Disk® - Aluminum alloy coated
Weight	1.1 kg	2.9 kg
Dimensions (w/d/h)	140 x 126 x 80 mm	173 x 277 x 94 mm
Permissible Ambient Conditions	5 - 31°C at 80% rel. humidity, 32 - 40°C decreasing linearly up max. 50% rel.humidity	5 - 31°C at 80 % rel. humidity 32 - 40°C decreasing linearly up to max. 50% rel. humidity
Protection Class	IP 21	IP 32

**Hei-Standard**

100 - 1,400 rpm

±2%

EC-Motor

Continuous

–

–

600 W\*

20 - 300°C

250°C

–

Pt 1000

–

with Pt 1000

Micro Controller

±5°C

Yes

25°C - over hotplate temperature

–

20 L

25 kg

600 W

135mm &amp; 145mm

Kera-Disk® - Aluminum alloy coated

2.9 kg

173 x 277 x 94 mm

5 - 31°C at 80 % rel. humidity  
32 - 40°C decreasing linearly up to  
max. 50% rel. humidity

IP 32

**Hei-Tec**

100 - 1,400 rpm

±2%

EC-Motor

Continuous

Digital

–

600 W\*

20 - 300°C

250°C

±1°C

Pt 1000

±1°C

with Pt 1000

Micro Controller

±5°C

Yes

25°C - over hotplate temperature

–

20 L

25 kg

600 W

135mm &amp; 145mm

Kera-Disk® - Aluminium alloy coated

2.9 kg

173 x 277 x 94 mm

5 - 31°C at 80 % rel. humidity  
32 - 40°C decreasing linearly up to  
max. 50% rel. humidity

IP 32

**Hei-Connect**

100 - 1,400 rpm

±2%

EC-Motor

Continuous

Digital

Digital (RS 232)

600 W\*

20 - 300°C

250°C

±1°C

Pt 1000

±1°C

with Pt 1000

Micro Controller

±5°C

Yes

25°C - over hotplate temperature

Yes

20 L

25 Kg

600 W

135mm &amp; 145mm

Kera-Disk® - alloy coated

2.9 kg

173 x 277 x 94 mm

5 - 31°C at 80 % rel. humidity  
32 - 40°C decreasing linearly up to  
max. 50% rel. humidity

IP 32



# MYA 4

## REACTION STATION

The Mya 4 Reaction Station is a 4-zone reaction station offering safe and precise heating, active cooling, software control, automatic reporting and data-logging for 24/7 unattended chemistry.

- 4 different temperature zones, each with heating and active cooling
- Use one compact system for a range of experiments
- Accepts a wide range of vessel sizes and styles
- Control your experiments and log results automatically
- Up to 200°C difference between adjacent positions
- Choose to control block by block or solution temperature
- Magnetic and overhead stirring (100 - 1,000 rpm)
- Temperature range : -30°C to 180°C



## PACKAGES

### Process Package

Choose the manifold head for use with glass condensers; overhead stirrers and process vessels; ideal for mimicking jacketed reactions.

### Discovery Package

Choose the reflux head for integrated reflux cooling; combines well with magnetic stirring; ideal for use with round bottom flasks.

## VESSEL STYLES & VOLUMES

- Vials and tubes range from 2 ml to 50 ml.
- Round bottom flasks 25 ml, 50 ml, 100 ml, and 250 ml
- Process reaction vessels: 50 ml, 100 ml, 150 ml, 250 ml and 400 ml
- 3 or 5 Multi-neck glass lids
- Additional glassware includes condensers, dropping funnels, solid addition funnels, stoppers, etc.



**Ask your local specialist for a no obligation consultation and demo.**

**Learn more on our YouTube channel**

<https://youtu.be/n5HjVpUlsxM>







# HEI-TORQUE

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## OVERHEAD STIRRERS

Our overhead stirrers enrich your lab with enhanced performance, reliability and powerful stirring for years. The Hei-TORQUE laboratory stirrers are equipped with the latest drive technology and the sealed housing protects the inside from vapor and dust.

Your lab agitator should not just be robust, but also practical. With its unique Quick-Chuck, you can change impellers fast and easy without any additional tools.

The Hei-TORQUE Series provides a suitable stirring tool for every application.

# HEI-TORQUE

The Hei-TORQUE models are suitable for all requirements, including small and light equipment, easy operation with high torque, precise adjustment options and an interface for documentation.

- All stirrers maintain exact speed under changing loads.
- A through-shaft design allows for adjusting the impeller position to make height adjustments more convenient to you.
- Reduce your work time and achieve excellent mixing results in challenging high-viscosity media.
- A single grip allows you to readjust the height of your stirrer on the optional telescopic stand.
- RS232 or USB interface to save all process data in a digital file.
- Unique impeller technology for demanding applications that mixes gels and other similar media in shorter times which reduces process cost and working hours.
- Intuitive touch panel made of glass designed for easy operation.
- All models are designed for continuous 24 hour operation - including challenging high viscosity applications in polymer research.



# HEI ON POWER

## Benefits at a Glance



Non-sparking German made motors for additional safety.



Sealed housing, which complies with high protection class IP 54.



To prevent spills and splashing media the speed ramps up slowly until you set rpm has been achieved.



The electronic stirrers feature a smooth start operation which prevents spills and splashing media.



Minimum Noise level is below 50 db, even at maximum power.



An overtemperature sensor prevents heat up situations, particularly valuable in unattended continuous operation.



Avoid unintended stirring with slide touch panel.



The Quick Chuck creates a fast and easy way to change your impeller with only one hand.



The Hei-TORQUE Series has been tested and certified by OSHA's National Recognized Testing Laboratory (NRTL) Program. The certification states that the product complies with the requirements of one or more appropriate product safety test standards.

# The Hei-TORQUE Series – Infinite Stirring Capabilities

The Hei-TORQUE Series has a suitable solution for all requirements, including small and light equipment, easy operation with high torque, precise adjustment options and an interface for documentation.



## Hei-TORQUE Core

The Hei-TORQUE Core is lightweight for big tasks and has a compact design with enough power for large volumes. The smallest of the devices can mix up to 25L at low viscosity with ease.

**PN 036090005**



## Hei-TORQUE Value

The Hei-TORQUE Value is ideal for standard stirring tasks. They are designed to mix and disperse medias that require non-reproducible results in high-viscosity applications.

**Value 100: 036093030**

**Value 200: 036093050**

**Value 400: 036093070**



## Hei-TORQUE Precision

The Hei-TORQUE Precision is ideal for demanding tasks which have to be reproducible and documentable. The huge number of additional features and operation modes allows for a perfect adjustment to your individual application.

**Precision 100: 036093090**

**Precision 200: 036093110**

**Precision 400: 036093150**

# IMPELLERS

Precise working with an overhead stirrer depends on the right choice of the stirrer tool. When choosing a stirrer tool you have to consider its different characteristics and their effects.



## Blade & Half Moon Impellers

Type	Blade Size (mm)	Material	Length (mm)	Max rpm	PN
<b>BR 10 Cross-Blade Impeller</b>	50 x 12	Stainless Steel AISI 316Ti	400	2,000	036304390
<b>BR 11 Straight-Blade Impeller</b>	50 x 12	Stainless Steel AISI 316Ti	400	2,000	036300340
<b>BR 12 Pivoting-Blade Impeller</b>	60 x 15	Stainless Steel AISI 316Ti	400	2,000	036300350
<b>BR 13 Square-Blade Impeller</b>	70 x 70	Stainless Steel AISI 316Ti	450	800	036300360
<b>BR 14 Collapsible-Blade Impeller</b>	90 x 10	Stainless Steel AISI 316Ti	400	800	036300370
<b>HR 18 Half-Moon Impeller</b>	65 x 18 x 3	PTFE	350	800	036300460

## Radial-Flow Impellers

Type	Ø Turbine Size (mm)	Material	Length (mm)	Max rpm	PN
<b>TR 20 Radial-Flow Impeller</b>	28	Stainless Steel AISI 316Ti	400	2,000	036040052
<b>TR 21 Radial-Flow Impeller</b>	50	Stainless Steel AISI 316Ti	400	2,000	036300390

## Anchor-Type Impellers

Type	Blade Size (mm)	Material	Length (mm)	Max rpm	PN
<b>AR 19 Anchor-Type Impeller</b>	60 x 45 x 5	PTFE	350	800	036300450

## Propeller-Type Impellers

These impellers are recommended for applications which require average or high speed and mixing tasks with medium or high viscosity.

Type	Prop Size (mm)	Material	Length (mm)	Max rpm	PN
PR 39 Pitched-Blade Impeller	75	PTFE	350	800	036300440
PR 30 Pitched-Blade Impeller	58	Stainless Steel AISI 316Ti	400	2,000	036300400
PR 31 Ringed Propeller	33	Stainless Steel AISI 316Ti	400	2,000	036300410
PR 32 Ringed Propeller	45	Stainless Steel AISI 316Ti	400	2,000	036300420
PR 33 Ringed Propeller	66	Stainless Steel AISI 316Ti	400	800	036300430



## VISCO JET®

VISCO JET® Impellers are an all-rounder for low to high viscosity medias. These impellers can reduce your process times while preforming the best mixing results.



### VISCO JET® 60 mm

Material: Stainless Steel  
Ø (mm): 60  
Speed Range (rpm): 200 - 800  
Vessel dia. (mm): 80 -150  
**PN 036300470**



### VISCO JET® 80 mm

Material: Stainless Steel/Plastic  
Ø (mm): 80  
Speed Range (rpm): 200 - 700  
Vessel dia. (mm): 115 - 200  
**PN 036300480**  
**Plastic PN 036300490**



### VISCO JET® 120 mm

Material: Stainless Steel/Plastic  
Ø (mm): 120  
Speed Range (rpm): 120-500  
Vessel dia. (mm): 170 - 300  
**PN 036300500**  
**Plastic PN 036300510**

	Ø (mm)	Material	Speed Range	Vessel Dia. (mm)	PN
VISCO JET® Crack 80	80	Stainless Steel AISI 316Ti	200 -700	115 - 200	036300505
VISCO JET® Crack 120	120	Stainless Steel AISI 316Ti	120 - 500	170 - 300	036300506



# HEI-CONTROL SOFTWARE

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For automated and reproducible processes, the simultaneous operation of multiple devices and applications with high viscosities in conjunction with required heat output (e.g. cosmetics). Combine the fastest heat-up times of the Hei-PLATE magnetic stirrers with the power and precision of the Hei-TORQUE Precision.

## Use the free software to

- Program process parameters
- Read out and save processes in the software
- Load saved settings for reproducible results

Download the free software at  
[heidolphna.com](http://heidolphna.com)



# AVA™ SOFTWARE

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AVA™ allows you to take control of your multi-device jacketed reaction systems by automatically logging your process data and allowing for unattended chemistry.



- Control up to 4 reaction systems with up to 16 devices on one screen.
- Create complex experiments with a number of steps in series or parallel.
- Pre-program multi-step recipes, with the flexibility to make and track on the fly adjustments.
- Interlink devices and set feedback/control loops, end point conditions and safety limits.
- Set device parameters and safety limits

# TECHNICAL SPECIFICATIONS

## Overhead Stirrers

Model	Hei-TORQUE Core	Hei-TORQUE Value 100	Hei-TORQUE Value 200
Power Rating, Motor Input/Output	105/75 W	90/50 W	120/80 W
Number of Speed Gears	1	1	1
Speed Range	20 - 2,000 rpm	10 - 2,000 rpm	10 - 2,000 rpm
Direction of Rotation	–	–	–
Speed Indicator	Digital	Digital	Digital
Operating Panel	Monochrome 2"	Monochrome 2.4"	Monochrome 2.4"
Speed Control	Electronic	Electronic	Electronic
Torque Max	40 Ncm*	100 Ncm*	200 Ncm
Torque Indicator	Symbol	Symbol	Symbol
Overheat Protection	Automatic Cut-Out	Automatic Cut-Out	Automatic Cut-Out
Motor Protection	Temperature Control Software	Temperature Control Software	Temperature Control Software
Viscoisty Max.	10,000 mPas	60,000 mPas	100,000 mPas
Stirring Cap Max	25 L	50 L	50 L
Analog/Digital Interface	–	–	–
Admissible Session	Continuous Operation	Continuous Operation	Continuous Operation
Counter/Timer	Yes	–	–
Shaft Diameter Max	10.5 mm	10.5 mm	10.5 mm
Dimensions	70 x 195 x 281.5 mm	86 x 247 x 350 mm	86 x 247 x 350 mm
Stay Bar Size (Ø x w)	10.5 mm	10.5 mm	13 x 160 mm
Weight	2.3 kg	4.4	5.1 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
Protection Class	IP 42	IP 54	IP 54

Standard supply voltage: 115 V. Other voltags upon request, please specify for order.

\* temporary overload 65 Ncm

**Hei-Torque Value 400**

150/90 W

2

10 - 400 rpm  
20 - 2,000 rpm

–

Digital

Monochrome 2.4"

Electronic

400 Ncm

Symbol

Automatic Cut-Out

Temperature Control Software

250,000 mPas

100 L

–

Continuous Operation

–

10.5 mm

93 x 247 x 350 mm

13 x 160 mm

5.3 kg

5–31 °C at 80 % rel. humidity,  
32–40 °C decreasing linearly  
up to max. 50 % rel. humidity

IP 54

**Hei-TORQUE Precision 100**

90/50 W

1

10 - 2,000 rpm

Yes

Digital

Color 3.2"

Electronic

100 Ncm

Precise Value

Automatic Cut-Out

Temperature Control Software

60,000 mPas

50 L

USB and RS 232

Continuous Operation

Yes

10.5 mm

86 x 247 x 350 mm

13 x 160 mm

4.4 kg

5–31 °C at 80 % rel. humidity,  
32–40 °C decreasing linearly  
up to max. 50 % rel. humidity

IP 54

**Hei-TORQUE Precision 200**

120/180 W

1

10 - 2,000 rpm

Yes

Digital

Color 3.2"

Electronic

200 Ncm

Precise Value

Automatic Cut-Out

Temperature Control Software

100,000 mPas

50 L

USB and RS 232

Countinuous Operation

Yes

10.5 mm

86 x 247 x 350 mm

10.5 mm

5.1 kg

5–31 °C at 80 % rel. humidity,  
32–40 °C decreasing linearly  
up to max. 50 % rel. humidity

IP 54

**Hei-TORQUE Precision 400**

150/90 W

2

10 - 400 rpm  
20 - 2,000 rpm

–

Digital

Color 3.2"

Electronic

**400 Ncm****Precise Value****Automatic Cut-Out**

Temperature Control Software

**250,000 mPas**

100 L

USB and RS 232

**Continuous Operation**

Yes

10.5 mm

93 x 247 x 350 mm

10.5 mm

5.3 kg

5–31 °C at 80 % rel. humidity,  
32–40 °C decreasing linearly  
up to max. 50 % rel. humidity

IP 54



# H-GENIE™

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## HYDROGEN GENERATOR

The H-Genie™ is a compact high pressure hydrogen gas generator designed to be the safest and most powerful gas generator in the world specifically for chemists. As the only generator capable of generating up to 1,450psi of hydrogen gas from water at up to 1 NL/min, the Genie is designed to be the true smart gas cylinder replacement for any chemistry laboratory. It utilizes patented pressure cell technology to produce 4.0 purity from water pressure up to 100 bar (145.5 - 1450 psi) at flow rates up to 1 NL/min. The H-Genie will then monitor hydrogen consumption and notify you when the reaction has stopped. The new H-Genie: Generating Chemistry Safely!

The system is designed to be simple to use with any reactor system. The H-Genie will fill the vessel until the pressure or required volume is reached and automatically maintain the pressure of hydrogen in the vessel as it is continuously consumed by the reaction.

## SAFETY & FEATURES



### ON-DEMAND GENERATING

Hydrogen is generated on demand from water electrolysis and 3 liters of deionized water. No hydrogen cylinders necessary.



### NO HYDROGEN CYLINDERS

No Hydrogen cylinders means the H-Genie can be used in any fume hood freeing up additional space.



### PATENTED PRESSURE CELL TECHNOLOGY

The H-Genie utilizes patented pressure cell technology to produce 4.0 purity from water at pressures up to 100 bar (145.5 - 1450 pxi) at flow rates up to 1 NL/min.



### SAFETY DETECTION

The system includes hydrogen detectors to automatically detect if there is a gas leak, pressure drop, or the concentration of hydrogen gas has risen above a safe level.



### NO STORAGE OF HYDROGEN

The H-Genie does not store hydrogen but generates it on-demand. If there is an earthquake there is no hydrogen internally to cause a risk and a power cut would stop production of hydrogen automatically.

**WATER GOES IN**

**OXYGEN REMOVED**

**HYDROGEN IS LEFT**

	H-Genie
Pressure Range (bar)	1 - 100
Purity (%)	99.99
Gas Flow Range (NL/min)	0.1 to 1.0
Hydrogen Production Rate (NL/min)	110V
Water Consumption Rate (ml/hr)	200
Water Reservoir Capacity (L)	3
Water Requirement	Deionized Water
Recommended Environment	Ventilated Fume Hood
PN	065000000



# AIR SENSITIVE

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## GLOVE BOXES & AIR PURIFICATION

With our Glove Boxes and Solvent Purification Systems, we are here to ensure your laboratory environment is free of oxygen, moisture with integration of any OEM equipment. Also we understand that time management and maximum efficiency are crucial in your research, so our line is fully automated and flexible, allowing you to create an environment for air-free development of air-sensitive materials simply.



## ACRYLIC GLOVEBOXES

These hermetically sealed enclosures provide reliable yet economical ways to conduct your air sensitive reactions under inert conditions. Your Heidolph PureLab Acrylic Glovebox can be built to order or you can choose from our standard configurations. You can also chose from other materials of construction to meet your compatibility.

- Economical Containment Solutions
- Variety of Configurations and sized systems
- Maintainable Inert Atmosphere
- Solvent Resistant
- Gas Purifier

**P/N 2 GB: 062120005**

**P/N 4 GB: 062130004**

**P/N Acrylic 2 GB: 062130010**

## MICRO SOLVENT PURIFICATION SYSTEM

The Heidolph Pure Solve Line of Solvent Purification Systems offer the best in safety, quality components, operator interface and unsurpassed experience in drying and deoxygenating solvents.

The Micro Solvent Purification System is designed as both an economic and space friendly alternative to the larger more tradional free standing units. The system is perfect for the researcher with modest requirements for a single anhydrous solvent who prefers the convenience of having a dedicated solvent drying and dispensing station. No longer do you have to share; now you can have your own.

**P/N 062100010**





Product	P/N
Hei-VAP Ultimate Hand Lift (HL) G3B	036041046
Hei-VAP Ultimate Hand Lift (HL) G3B XL	036041047
Hei-VAP Ultimate Hand Lift (HL) G5B	036041048
Hei-VAP Ultimate Hand Lift (HL) G6B	036041049
Hei-VAP Ultimate Motor Lift (ML) G1	036041050
Hei-VAP Ultimate Motor Lift (ML) G3	036041051
Hei-VAP Ultimate Motor Lift (ML) G3 XL	036041052
Hei-VAP Ultimate Motor Lift (ML) G5	036041053
Hei-VAP Ultimate Motor Lift (ML) G6	036041054
Hei-VAP Ultimate Motor Lift (ML) G1B	036041055
Hei-VAP Ultimate Motor Lift (ML) G3B	036041056
Hei-VAP Ultimate Motor Lift (ML) G3B XL	036041057
Hei-VAP Ultimate Motor Lift (ML) G5B	036041058
Hei-VAP Ultimate Motor Lift (ML) G6B	036041059
Hei-VAP Ultimate Control Hand Lift (HL) G1	036041060
Hei-VAP Ultimate Control Hand Lift (HL) G3	036041061
Hei-VAP Ultimate Control Hand Lift (HL) G3 XL	036041062
Hei-VAP Ultimate Control Hand Lift (HL) G5	036041063
Hei-VAP Ultimate Control Hand Lift (HL) G6	036041064
Hei-VAP Ultimate Control Hand Lift (HL) G1B	036041065
Hei-VAP Ultimate Control Hand Lift (HL) G3B	036041066
Hei-VAP Ultimate Control Hand Lift (HL) G3B XL	036041067
Hei-VAP Ultimate Control Hand Lift (HL) G5B	036041068
Hei-VAP Ultimate Control Hand Lift (HL) G6B	036041069
Hei-VAP Ultimate Control Motor Lift (ML) G1	036041070
Hei-VAP Ultimate Control Motor Lift (ML) G3	036041071
Hei-VAP Ultimate Control Motor Lift (ML) G3 XL	036041072
Hei-VAP Ultimate Control Motor Lift (ML) G5	036041073
Hei-VAP Ultimate Control Motor Lift (ML) G6	036041074
Hei-VAP Ultimate Control Motor Lift (ML) G1B	036041075
Hei-VAP Ultimate Control Motor Lift (ML) G3B	036041076
Hei-VAP Ultimate Control Motor Lift (ML) G3B XL	036041077
Hei-VAP Ultimate Control Motor Lift (ML) G5B	036041078

Product	P/N
1-L Heating Bath	036110440
2-L Heating Bath	036110420
4-L Heating Bath	036110400
Concave Block Adapter	036110450
1-L Heating Bath for Oil	036110430
2-L Heating Bath for Oil	036110410
4-L Heating Bath for Oil	036110390
Holding Device MR	036306060
PT 1000 Clamping System	036300883
PT 1000 Clamping System for 3 - 5 L	036300884
PT 1000 Temperature Sensor Stainless Steel	036110350
PT 1000 Temperature Sensor Glass-coated	036110360
RS 232 Cable	036306014
Silicone Proactive Cover	036306050
Stirring Bars - Cylindrical Shape	036300930
Stirring Bars - Cross Shape	015880270
Stirring Bars - Evaluation Kit	015882570
Stirring Bars - Oval Shape (15x6 mm)	036111260
Stirring Bars - Oval Shape (25x10 mm)	036111270
Stirring Bars - Oval Shape (30x10 mm)	036111280
Findenser B24 Cone B24 Socket	015610000
Findenser B29 Cone B24 Socket	015610001
Findenser B19 Cone B19 Socket	015610002
Findenser Mini B24 Cone B24 Socket	015610003
Findenser Mini B19 Cone B24 Socket	015610004
Findenser Mini B14 Cone B14 Socket	015610005
Heat-On Multi-Well Block System	015852000
Heat-On Multi-Well Block Basic	015822010
Heat-On Multi-Well System Polymer	015852015
Heat-On Multi-Well Block Basic Polymer	015852025
Heat-On Multi-Well Holder	015882000
Heat-On Safety Lifting Handles	015882140
Heat-On 10ml Insert	015882010

Product	P/N
Hei-VAP Ultimate Control Motor Lift (ML) G6B	036041078
Glassware Set G1 Standard 24/40	036301230
Glassware Set G1 Coated 24/40	036301250
Glassware Set G3 Standard 24/40	036301410
Glassware Set G3 Coated 24/40	036301430
Glassware Set G5 Standard 24/40	036301800
Glassware Set G5 Coated 24/40	036301820
Glassware Set G6 Standard 24/40	036302040
Glassware Set G6 Coated 24/40	036302060
Glassware Set G3 XL Standard	036301421
Glassware Set G3 XL Coated	036301422
Heat-On 25ml Insert	015882020
Heat-On 50ml Insert	015882030
Heat-On 100ml Insert	015882040
Heat-On 150ml Insert	015882050
Heat-On 100ml Block Polymer	015882055
Heat-On 250ml Block Polymer	015882060
Heat-On 500ml Block Polymer	015882070
Heat-On 1 Liter Block Polymer	015882080
Heat-On 2 Liter Block Polymer	015882090
Heat-On 3 Liter Block Polymer	015882100
Heat-On 4 Liter Block Polymer	015882105
Heat-On Insert for 8x16mm Tube	015882110
Heat-On Insert for 6x17mm Biot	015882115
Heat-On Insert for 2x20mm Tube	015882120
Heat-On Insert for 2x24mm Tube	015882130
Heat-On 2x1 in Tube	015882135
Heat-On Insert for 3x28 Biogate	015882136
Heat-On Safety Lift Handles	015882140
Heat-On Multi-Well Holder PTFE	015882161
Heat-On Insert for 4x20mm Tube	015882270
Heat-On Insert for 4x24mm Tube	015882290
Heat-On 5 Liter Block	015882300

Product	P/N
Heat-On 2L Florentine Block	015882350
Heat-On 1L Florentine Block	015882360
Heat-On 500ml Florentine Block	015882370
Heat-On 200ml Pear Block	015882380
Heat-On 300ml Pear Block	015882390
Heat-On Adaptor Plate F Square	015882490
Heat-On Insert Upgrade Kit	015882491
Heat-On 200ml Block with Flask Cutout	015882580
Heat-On 250ml Block with Flask Cutout	015882590
Heat-On Mtp Holder	015882610
Heat-On Mtp Insert 24x16mm	015882620
Heat-On Mtp Insert 48x12mm	015882620
Support Rod for Bath Attachments from 3 to 5 L	036306030
Retort Clamp	015882540
Boss Head	015882550
Flask Stand and Clamp Kit	015882510
Starfish Base Plate (135mm)	015890010
Starfish Base Plate (145mm)	015890020
Starfish Base Plate Handles (Pair)	015890060
150ml Flask Insert	015890250
100ml Flask Insert	015890260
50ml Flask Insert	015890270
10ml Flask Insert	015890280
5ml Flask Insert	015890290
Monoblock for 16x25mm Tubes	015890080
Monoblock for 16x24mm Tubes	015890090
Monoblock for 40x12mm Tubes	015890110
Monoblock for 16x28mm Vials	015892040
Monoblock for 20x21mm Vials	015900120
Monoblock for 40x17mm Vials	015890130
Monoblock for 40x15mm Vials	015890140
Monoblock for 40x12mm Vials	015890150
Polyblock for 1 x 250ml Flask	015890160

Product	P/N
Polyblock for 3 x 25mm Tubes	015890170
Polyblock for 3 x 24mm Tubes	015890180
Polyblock for 9 x 16mm Tubes	015890190
Polyblock for 9 x 12mm Tubes	015892000
Polyblock for 3 x 28mm Vials	015892050
Polyblock for 3 x 21mm Vials	015890210
Polyblock for 7 x 17mm Vials	015890220
Polyblock for 9 x 15mm Vials	015890230
Polyblock for 9 x 12mm Vials	015890240
5 Way Clamp - Velcro	015890310
5 Way Clamp - Silicone	015892140
Water Manifold	015890340
Gas/Vacuum Manifold	015890350
Replacement Self Adhesive Velcro Pads (200mm, 10 pack)	015890320
Replacement Velcro Loop Strips (200mm, 5 pack)	015890330
Replacement Silicone Straps (200mm, 5 pack)	015892170
650mm Support Rod	015890410
650mm Support Split Rod	015890420
Carousel 12 Reaction System	015862450
Quick Thread Glass Reaction Tube (6 pack)	015862540
Quick Thread Glass Reaction Tube (12 pack)	015862550
Easy-On Fluoropolymer Cap (6 pack)	015862520
Octagonal Stirring Bar 16.5mm RE (20 pack)	015880240
Cross Shape Stirring Bar 13mm (20 pack)	015880270
PTFE Magnetic Stirring Bar Retriever 350mm	015880280
PTFE Magnetic Stirring Bar Evaluation Kit (30 pack)	015880290
Silicone Seals for all Caps (100 pack)	015880430
Zinc Plated Wire Rack for 36x24mm Tubes	015860430
Carousel 12 Plus Stand	015862500
Carousel Stirring Hotplate 115V US Plug	015750024
Carousel Temperature Controller	015750003
Carousel 12 Plus Cooling Reservoir & Lid	015862460
Digital Thermometer (-250°C to +400°C)	015860140

Product	P/N
Dry Ice Scoop	015860170
Silicone Septa for PTFE Caps	015880430
250ml Reaction Flask, Reflux Tube and Connecting Set	015861962
B24/29 Rodaviss Sealing Cap	015880500
Rotary Evaporator Adapters Ordinary B29 Socket to B24 Cone	015880530
100ml Reaction Flask	015880610
2 x 250ml Azeotropic Reaction Flask (3 pack)	015881552
Insert for 100ml Reaction Flask (6 pack)	015860480
Reaction Flask Support Ring (6 pack)	015860500
Elliptical Stirring Bar 25mm RE (10 pack)	015880330
Tubing for inert Gas or Reflux Cooling (2 meters)	015860550
250ml Reaction Flask with B24/29 Sidearm & Septa Port (6 pack)	015880670
2x B24/29 Liquid Additions Dropping Funnel & Pressure Equalizing Arm (3 pack)	015880680
B24/29 Solid Additions Funnel (3 pack)	015880690
PTFE/Silicone Septa 29mm - B24/29 (50 pack)	015880720
Cooled Carousel 6 Plus (Reservoir, Head, Stand & Cover)	015850410
Protective Cold Temperature Gloves	015860830
Cold Temperature Apron 1060mm Long Waterproof	015860180
Protective Face Shield	015860190
Cool-It Small Bowl & Lid	015882420
Cool-It Large Bowl & Lid	015882460
Adapter Plate for 135mm Hotplate	015882450
Silicone Seals for All Caps (100 pack)	015880430
Zinc Plated Wire Rack for 36x24mm Tubes	015860430



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