

Premium Laboratory Equipment

Shakers, Mixers & Peristaltic Pumps

# Robust acrobats



## 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 cost-free 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.

# Always in motion: Shakers, Mixers and Peristaltic Pumps

Quickly suspend, homogeneously emulsify, carefully mix, temperately move, steadily pump, or precisely measure – the right solution for every requirement. The Hei-MIX range offers countless options with different movement types, load capacities, and versatile accessory attachments for shaking and mixing. Whether it's for simple pumping or reproducible measuring: Hei-FLOW devices can be individually configured using a varied selection of pump drives.



## Hei-MIX Shakers & Mixers

### Leading Safety Standards

All models have a low center of gravity for secure footing, and an overheat control that turns the device off in an emergency. All platform shakers come equipped with a rubber mat on the platform so that your vessels do not slip or shift. The motor is insulated to prevent the platform from heating up and thermolabile samples becoming damaged.

### Superior Ease of Use

Limitless combinations: Test tube shakers, platform shakers with six different movement types (from one- to three-dimensional), and overhead shakers for a variety of vessel sizes. For specific tasks, you can select the desired amplitude and tilt angle from several options for many movement types. You can also choose between three different load capacities.

### Reduced Cost of Ownership

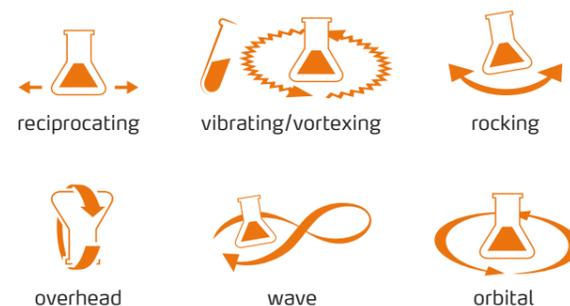
Reliable and robust with an average lifespan of more than 10 years, thanks to maintenance-free, sparkless motors for unlimited continuous operation, and sealed housing for corrosion protection. The modular concept of the Incubator 1000 reduces processing times even further and expands your platform shaker with an incubation system at low cost.



#### Incubator 1000 – the modular incubation system

- Allows simultaneous tempering of your individual application
- Use valuable laboratory space more efficiently: The modular concept requires significantly less space than other comparable systems
- You can quickly and easily integrate your platform shaker in a low-cost incubation system
- Be flexible! The size of the vessels does not matter: with three different incubator hoods, you have all the options available

#### 6 movement types: from one- to three-dimensional



## Test Tube Shakers – Vortexer

### Fast and powerful

Ideal for quickly mixing the contents of test tubes, centrifuge tubes, and similar vessels with various diameters and lengths. Without exception, the powerful shaking motion guarantees excellent mixing results.

### Vibrating/Vortexing



#### Multi Reax – the allrounder

For mixing 12 or 26 samples simultaneously

- Package includes two attachments: Device for 26 test tubes with 10 to 16 mm Ø, and for 12 test tubes with 16 to 32 mm Ø
- The vibration orbit of 3 mm delivers excellent mixing results even for large liquid samples with suspended solids
- Digital, stepless speed control with speeds from 150 to 2,000 rpm
- Process timer up to 999 minutes for automatically ending the shaking function



#### Reax top

##### The standard model

Fast and dependable dispersion even for media with suspended solid or high viscosity – perfect for temporary operation.

#### Reax Control

##### The precision model

The electronic speed governor keeps speeds consistent even at low speeds and changing loads.



# Platform Shakers

## Multifunctional and all-purpose

This product range has the right solution for all vessels and applications – from fast and powerful to slow and gentle. Even highly sensitive samples for cell research can be processed: The motor is insulated to prevent the platform from heating up and causing thermal damage to the sample.

- Powerful or gentle mixing even for liquid samples with suspended solids
- Consistency and time – move cell cultures evenly and constantly
- Versatile attachments for use with different vessels

### Vibrating

From powerful to gentle, even for liquid samples with suspended solids: achieve the best mixing results thanks to different amplitudes and load capacities.



### Orbital

The slow and even orbital movement of the Rotamax and Unimax models keeps your samples in continuous motion.



### Rocking

The tilting motion provides excellent results, whether dyeing, washing or cell rearing.



#### Titramax 100/101/1000

**Compact, powerful and temperature-controlled**  
Excellent mixing results the powerful or gentle way with microtiter plates – even for liquid samples with suspended solids.

#### Vibramax 100/110

**For gentle to powerful mixing**  
Varied options possible through combining tension rollers, clamps, or attachment for up to 49 test tubes.

#### Rotamax 120

**The compact one**  
The 20 mm orbit keeps samples in optimal motion. Especially suited for culture plates.

#### Unimax 1010/2010

**Perfect for Erlenmeyer flasks in different sizes**  
Combine model 1010 with the Incubator 1000 for additional tempering options, or with the Unimax 2010 for an increased load capacity of up to 10 kg.

#### Duomax 1030

**The versatile**  
Two different tilt angles to choose from and compatible with the Incubator 1000 for gentle tempering.

# Platform Shakers

## Strong and customizable

For applications such as phase separations or staining electrophoresis gels, you need specialists: Temperature control, high load capacity, two different tilt angles, and attachments for use with separatory funnels, Erlenmeyer flasks, bottles, or culture plates.

### Reciprocating

For the correct shaking intensity during phase separation: the Promax models are perfect for use with separatory funnels.



### Wave

Three-dimensional movement and two tilt angles for best results, such as when staining electrophoretic gels.



#### Promax 1020

##### The temperature controllable

Compatible with the Incubator 1000 for tempering. The 32 mm stroke is perfect for separating funnels.

#### Promax 2020

##### The sturdy one

Large model with 10 kg load capacity and 20 mm stroke for larger amounts.

#### Polymax 1040

##### The temperature controllable

Models with 5° or 10° tilt angles for gentle or more powerful movement amplitude. Compatible with the Incubator 1000.

#### Polymax 2040

##### The large scale model

Comes with a large usable area of 39x34 cm for increased sample throughput and with stepless speed control.

# Incubator 1000

## Make more of your platform shaker

The unique, modular system lets you do it all: mixing, shaking, and tempering – all without the need for an additional steaming cabinet. Suitable for the 1000-series models of the platform shakers Duomax 1030, Polymax 1040, Titramax 1000, Unimax 1010, and Promax 1020.



#### Platform shakers

Select a compatible 1000-series model.

#### Heating module

The heating module gently warms the circulating air to up to 65 °C. The integrated low-noise blower ensures silent and even heat distribution within the incubator hood.

#### Transparent hood

Stepless adjustment, non-fogging construction (PETG).



This is your space-saving incubation system.



#### Incubator hood in three sizes

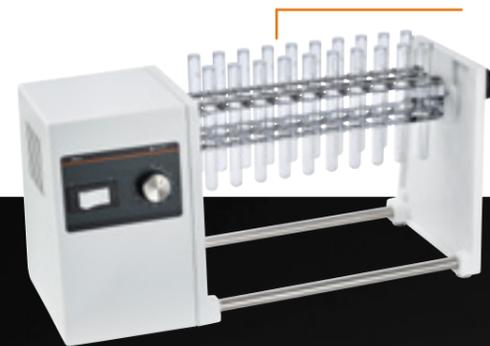
**Flat:** 163 mm height for small vessels ranging from 25 ml to 100 ml  
**High:** 267 mm height for medium-sized vessels and 500 ml Erlenmeyer flasks  
**XL:** 428 mm height for large vessels and 2,000 ml Erlenmeyer flasks

Customizable or as a package (Unimax/Titramax) – find out more at [www.heidolph.com](http://www.heidolph.com)

# Overhead Shakers

For small to large tasks

The work horse for different vessels and volumes – even water, wastewater, and silt tests pursuant to DIN 38414 part 4.



Accessory adapter for up to 20 test tubes in one work stage.

## Overhead

With quick-clamping system for easily swapping and using different vessels.



- Stepless speed control
- Quick-clamping system for easy swapping
- Can be used with different vessels



### Reax 2

For 2 vessels or up to 20 test tubes with optional accessory. Load capacity: 1 kg.

### Reax 20 for 4, 8, or 12 flasks

In accordance with DIN 38414 part 4. Also suitable for graduated cylinders or wide-neck bottles with a height up to 270 mm and a diameter up to 136 mm.



# Accessories

Limitless combinations with the greatest range of accessories

Various attachments and adapters for numerous applications. Perforated platforms in different sizes make it possible to equip clamps or separatory funnel clamps, or even allow for a multilevel assembly as needed.



Please visit [www.heidolph.com](http://www.heidolph.com) for more information on all accessories.

## Hei-FLOW Peristaltic Pumps

### Leading Safety Standards

Contamination-free transport is particularly important for aggressive, corrosive, or sterile media. The device ramps up slowly to protect from splatters, an optional foot-pedal also allows for operation outside of closed laboratory hoods. Sparkless motors, overheating protection that shuts down the motor in case of overloading, and IP 55-class protection prevent outages, accidents or short circuiting.

### Superior Ease of Use

Great flexibility with different single-channel pump heads and refittable models for optimum use of multi-channel pump heads. Space-saving design, stackable, and intuitive operation. Whether it's for pumping or dosing – the powerful Hei-FLOW range offers stable revolution speeds under changing loads and all options for flow rates from 0.005 to 4,151 ml per minute.

### Reduced Cost of Ownership

The self-priming pumps do not require seals or valves and do not come into direct contact with the media. Complete with maintenance-free motors and corrosion-protected housing. This ensures a long product lifespan, reliability, and robustness while maintaining minimal maintenance and repair costs.



#### Continuously pump, precisely dose YOUR BENEFITS

- Whether it's for simple pumping or measuring dosages precisely during interval operation with pauses for filling small vessels – the Hei-FLOW range meets all your needs
- The medium remains in the tube; contact to the pump drive or you is impossible, thereby increasing your safety
- The pump drives usually do not need cleaning, as they work without risk of contamination. For you, this means saving time between two applications
- Hei-FLOW pumps are self-priming and do not need seals or valves



**For cellular research, you should use a pump drive with convex rolls that squeeze the tube in an unconventional manner.**

## Hei-FLOW Value

Your intuitive companion for easy pumping

Choose between two models depending on your demands concerning flow rate:

#### Value o6

with a high speed range for flow rates ranging from 4.0 to 4,151 ml/min\*

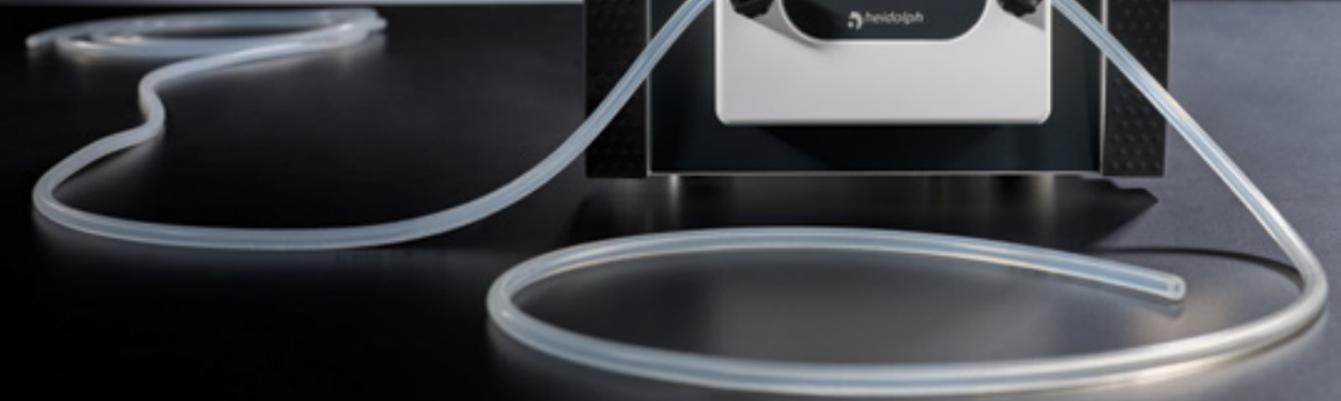
#### Value o1

with a low speed range for flow rates ranging from 0.85 to 861 ml/min\*

#### Value o1 Multi

including adapter for multi-channel pump heads for flow rates ranging from 0.005 to 364 ml/min

\* With single-channel pump drive



- Analogue flow speed control from 10 to 600 rpm
- Stable speed even under changing loads
- Hei-FLOW Value devices pump with an accuracy of  $\pm 5\%$
- You can change the flow direction: clockwise or counter-clockwise

Flow rates of 0.85 to 861 ml/min are not precise enough? Use multi-channel pump heads to achieve flow rates between 0.005 and 364 ml/min by simply refitting with an adapter and the relevant pump drive. Compatible with Hei-FLOW Value o1.

**Reconfigurable for multi-channel operation with adapter**

More information on page 18



# Hei-FLOW Advantage

## For reproducible pumping

With analogue interface for regulating speed and direction, as well as an On/Off feature.

- Analogue flow speed control from 5 to 600 rpm
- Consistent speed even under changing loads, thanks to electronic speed governor
- Pump with an accuracy of  $\pm 3.5\%$
- Flow direction can be changed: clockwise or counter-clockwise
- Button for maximum speed accelerates the filling and emptying of hoses
- Compatible with optional foot-pedal for operation when using in closed laboratory hoods

### Advantage 06

High speed range for high flow volumes (2.0–4,056 ml/min)

### Advantage 01

Low speed range for small volumes (0.38–813 ml/min)

### Advantage 01 Multi

For even greater precision – with adapter for operating with multi-channel pump heads



Multi-channel cassettes in three sizes for flow rates ranging from 0.005 to 329 ml/min.

# Hei-FLOW Precision

## Meets even the highest standards: Your precise pump for pumping and dosing

With digital display and RS 232 interface as well as options for calibrating the flow rate or volume.

### Precision 06

High speed range (2.0–4,056 ml/min)

### Precision 01

More precision in low speed range (0.36–813 ml/min)

### Precision 01 Multi

Complete with adapter for multi-channel pumps for maximum precision of 0.005 to 329 ml/min

- Speed, direction and On/Off feature can be controlled via the analogue interface for 0–10 V, 4–20 mA or digitally via the built-in RS 232 interface
- Easy calibration of dosing volume and flow rate
- Flow characteristic of pump heads is pre-programmed
- Select the flow direction: clockwise or counter-clockwise
- Processing parameters can be adjusted freely: Speed, tube diameter, dosage volume, interval dosage, and pause times
- Electronic speed control at an accuracy of  $\pm 1\%$  and guaranteed consistent rotations even under changing loads
- Button for maximum speed accelerates the filling and emptying of hoses



**TIP:** For peak concentration when precise doses in small vessels, you can start or stop the process using the optional foot-pedal.

# Single-Channel Pump Heads

## Individually customize your Hei-FLOW model

Pumping and dosing for all applications, even for specialized tasks such as pumping organic cell cultures. The sealed ball bearings protect against corrosion and ensure reliable continuous operation. The varied selection of pump drives for single-channel operation allows customization perfectly suited to individual applications:



### SP standard

#### All-purpose for regular pumping tasks

With rollers made of stainless steel and polyamide. Two models are available for tubes with a wall thickness of 1.6 mm or 2.5 mm. Depending on drive and tubing, the flow rate ranges from 2.0–4,151 ml/min. Convex rollers prevent damage to organic cell cultures.



### SP vario

#### Flexible for multi-purpose use

A rotor with adjustable roller distance allows for tubes with a wall thickness ranging from 1.6 to 2.5 mm. The rollers are made of stainless steel and coated aluminum. Depending on drive and tubing, the flow rate ranges from 2.0–4,151 ml/min. Convex rollers prevent damage to organic cell cultures.

For cellular research, you should use a pump drive with convex rolls that squeeze the tube in an unconventional manner.



### SP quick

#### For when you need to change tubes quickly

The convenient lever allows tubes to be changed in seconds. The rollers are made of stainless steel. Two models are available for tubes with a wall thickness of 1.6 mm or 2.5 mm. Depending on drive and tubing, the flow rate ranges from 0,38–3,436 ml/min. Precise measuring: the five rollers ensure low pulsation.

# Tubes & Accessories

### Tygon® tube

For standard laboratory applications, food industry applications, or for hydrocarbons. Good resistance to acids, alkalis, and inorganic media – high durability. Thermoplastic and suitable for temperatures from -78 °C to +75 °C.

### Tygon® standard

For standard laboratory applications. Non-toxic and non-oxidizing

### Tygon® 2001 for food products

Ideal for products with a high fat content. Does not contain plasticizers or oils

### Tygon® for hydrocarbons

Specially for hydrocarbons, mineral oil products and distillates. Ozone and UV resistant



### Other tube types

PharMed®, tubes made of silicone and Viton® for applications in pharmacy, medicine, biology, or at high temperatures of -80 up to +205 °C.

### PharMed®

Ideal for medical, lab and research uses

### Silikon

Platinum-coated silicone hose for use in pharmaceuticals and biology

### Viton®

Excellent acid resistance at high temperatures

### Coupling

For tube sizes from 0.2–2.8 mm for connecting stop and extension tubes.



You can find an overview of all our tubes online at [www.heidolph.com](http://www.heidolph.com)

# Multi-Channel Pumps

## Increased efficiency, even more options

The cassettes are easy to change and thus can increase the flow capacity of your Hei-FLOW multi-channel pump to up to 12 channels in simultaneous operation.

The following pump drives can be configured for multi-channel operation:

- Hei-FLOW Value 01
- Hei-FLOW Advantage 01
- Hei-FLOW Precision 01



- When using tubes of different diameter per cassette, 12 individual flow rates can be processed simultaneously
- The cassette adjustments allow for simple cassette insertion and changing (even while pumping)
- Changing tubes is also simple and quick
- Pump drives with 8-roller systems are also available for pulsation reduction
- All compatible 01-series models are also available as a "01 Multi" pack, including adapter for use with multi-channel pump heads

# Multi-Channel Pump Heads

## Easy to configure or upgrade

Simply select the adapter and the multi-channel pump head for the compatible Hei-FLOW model (01 drive) and add compatible cassettes and tubes.



## Precise dosing

Thanks to the 8-roller system, you can use the multi-channel pump heads C4 and C12 for low pulsation pumping and, depending on the utilized tubes, high-precision dosing. The C12 model with integrated reduction gear is perfect for even the smallest volumes of flow rates from 0.005 to 54 ml/min. Use of two-stop tubing is required for the secure fastening of tubes.



**Multi-channel pump head C4**

Assembly with 4 x cassette small

**Multi-channel pump head C12**

Assembly with 12 x cassette small

**Cassette small**

**Two-stop Tubing**

## Customized pumping

Choose your assembly depending on the desired flow rate: Cassette medium for 0.24 to 27 ml/min or cassette large for 1 to 364 ml/min. The multi-channel cassettes medium and large are suitable for tubes of different diameters with a wall thickness of 1.6 mm.



**Multi-channel pump head C8**

Assembly with 8 x cassette medium or 4 x cassette large

**Cassette medium**

**Cassette large**

# Technical Specifications

## Shakers and Mixers

Model	Rotamax 120	Titramax 100	Titramax 101	Titramax 1000	Reax top	Reax control	Multi Reax	Reax 2	Reax 20/4 20/8 20/12
<b>Motion</b>	orbital	vibrating	vibrating	vibrating	vibrating	vibrating	vibrating	overhead	overhead
<b>Rotation speed</b>	20–300 rpm	150–1,350 rpm	150–1,350 rpm	150–1,350 rpm	0–2,500 rpm	0–2,500 rpm	150–2,500 rpm	20–100 rpm	1–16 rpm / 2–32 rpm
<b>Rotation speed setting</b>	electronic control	electronic control	electronic control	electronic control	analog	analog	digital	analog	electronic contr.
<b>Orbit/stroke</b>	20 mm	1.5 mm	3 mm	1.5 mm	5 mm	5 mm	3 mm	–	–
<b>Operating mode</b>	timer or continuous	timer or continuous	timer or continuous	timer or continuous	automatic or continuous	automatic or continuous	timer or continuous	–	–
<b>Timer</b>	–	yes	yes	yes	–	–	yes	–	–
<b>Power input</b>	33 W	31 W	31 W	31 W	51 W	51 W	50 W	27 W	280 W
<b>Weight</b>	5.5 kg	5.5 kg	5.5 kg	6.5 kg	2.8 kg	2.8 kg	9.8 kg	5.2 kg	23/28/33 kg
<b>Dimensions w/d/h</b>	245×310×125 mm	245×310×125 mm	245×310×125 mm	320×375×125 mm	134×172×105 mm	134×172×105 mm	270×410×172 mm	510×235×180 mm	<b>20/4</b> 490×520×465 mm <b>20/8</b> 770×520×465 mm <b>20/12</b> 1050×520×465 mm
<b>Platform size w/d</b>	220×220 mm	220×220 mm	220×220 mm	290×258 mm	–	–	–	–	–
<b>Accessories included</b>	non-skid rubber mat	space for 4 microtiter plates	space for 4 microtiter plates	space for 6 microtiter plates	–	–	2 carousel attachments	universal adaptor	–
<b>Load capacity</b>	2 kg	2 kg	2 kg	5 kg	–	–	1,5 kg	1 kg	30 kg
<b>Overheat protection</b>	self-resetting								
<b>Permissible ambient conditions</b>	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	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
<b>Protection class DIN EN 60529</b>	IP 30	IP 30	IP 30	IP 30	IP 22	IP 22	IP 30	IP 21	IP 21

Model	Duomax 1030	Polymax 1040	Polymax 2040	Promax 1020	Promax 2020	Unimax 1010	Unimax 2010	Vibramax 100	Vibramax 110
<b>Motion</b>	rocking	wave	wave	reciprocating	reciprocating	orbital	orbital	vibrating	vibrating
<b>Rotation speed</b>	2–50 rpm	2–50 rpm	2.5–50 rpm	30–250 rpm	20–400 rpm	30–500 rpm	20–400 rpm	150–1,350 rpm	150–2,500 rpm
<b>Rotation speed setting</b>	electronic contr.	electronic contr.	digital	digital	digital	digital	digital	electronic control	electronic control
<b>Orbit/stroke</b>	–	–	–	32 mm	20 mm	10 mm	20 mm	3 mm	1.5 mm
<b>Angle</b>	5/10°	5/10°	5/10°	–	–	–	–	–	–
<b>Operating mode</b>	timer or continuous								
<b>Timer</b>	yes								
<b>Power input</b>	115 W	115 W	115 W	50 W	115 W	50 W	115 W	31 W	46 W
<b>Weight</b>	8 kg	8 kg	16 kg	8 kg	16 kg	8 kg	16 kg	5.5 kg	12.2 kg
<b>Dimensions w/d/h</b>	320×375×185 mm	320×375×195 mm	426×435×208 mm	320×375×125 mm	426×435×135 mm	320×375×125 mm	426×435×135 mm	245×310×125 mm	245×310×146 mm
<b>Platform size w/d</b>	290×258 mm	290×258 mm	390×340 mm	290×258 mm	390×340 mm	290×258 mm	390×340 mm	220×220 mm	140×140 mm
<b>Accessories included</b>	non-skid rubber mat								
<b>Load capacity</b>	5 kg	5 kg	10 kg	5 kg	10 kg	5 kg	10 kg	2 kg	2 kg
<b>Overheat protection</b>	self-resetting								
<b>Permissible ambient conditions</b>	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	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
<b>Protection class DIN EN 60529</b>	IP 40	IP 40	IP 20	IP 40	IP 20	IP 40	IP 20	IP 30	IP 30

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

# Technical Specifications

## Peristaltic pumps

Model	Hei-FLOW Value 01	Hei-FLOW Value 06	Hei-FLOW Advantage 01	Hei-FLOW Advantage 06	Hei-FLOW Precision 01	Hei-FLOW Precision 06
Flow rates single-channel pumps	0.85–861 ml/min	4.0–4,151 ml/min	0.38–813 ml/min	2.0–4,056 ml/min	0.38– 813 ml/min	2.0–4,056 ml/min
Flow rates multi-channel pumps	0.005–364 ml/min	–	0.005–329 ml/min	–	0.005–329 ml/min	–
Flow rate accuracy*	±5 %	±5 %	±3.5 %	±3.5 %	±1 %	±2 %
Speed range	10–120 rpm	50–600 rpm	5–120 rpm	24–600 rpm	5–120 rpm	24–600 rpm
Speed setting	scale	scale	scale	scale	digital	digital
Electronic speed control	digital	digital	digital	digital	digital	digital
Control accuracy motor	±0.5 %	±0.5 %	±0.5 %	±0.5 %	±0.5 %	±0.5 %
Select direction of rotation	CW/CCW	CW/CCW	CW/CCW	CW/CCW	CW/CCW	CW/CCW
Motor power	100 W					
Supply power	100 W					
Analog interface	–	–	for speed 0–10 V/4–20 mA direction of rotation start/stop			
Digital interface	–	–	–	–	RS 232	RS 232
Flow rate indicator	–	–	–	–	digital	digital
Volume dosing	–	–	–	–	0.001–9,999 ml	0.001–9,999 ml
Interval dosing	–	–	–	–	0.001–9,999 ml in breaks 0.1 sec–750 h	0.001–9,999 ml in breaks 0.1 sec–750 h
Smooth start	–	–	–	–	yes	yes
Electronic brake	–	–	–	–	yes	yes
Foot-pedal connection	–	–	yes	yes	yes	yes
Continuous operation	<b>hours/days</b> 24/7	24/7	24/7	24/7	24/7	24/7
Safety feature	overheat protection	overheat protection	electronic current limiter and overheat protection	electronic current limiter and overheat protection	electronic current limiter and overheat protection	electronic current limiter and overheat protection
Weight	7.6 kg	7.1 kg	7.6 kg	7.3 kg	7.7 kg	7.3 kg
Protection class	<b>DIN EN 60529</b> IP 55	IP 55	IP 55	IP 55	IP 55	IP 55
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
Dimensions	<b>w/d/h</b> 166 × 256 × 225 mm	166 × 256 × 225 mm	166 × 256 × 225 mm	166 × 256 × 225 mm	166 × 256 × 225 mm	166 × 256 × 225 mm

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

\* Flow-rate accuracy pertains to water without counter pressure

Discover our rotary evaporators at  
[www.heidolph.com](http://www.heidolph.com)



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