

# 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

**P/N 569-00010-00**



## Guard shield

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

**P/N 569-00020-00**



## 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

**P/N 569-00500-00**



## Ventilation and replenishment valve

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

**P/N 514-51100-00**



## Extension cable

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

**P/N 14-300-020-12**



## Holding device

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

**P/N 569-01000-00-0**



## Spare vapor tube

Standard joint size: NS 29/32 (NS 24/29 ground joints available on request)

**P/N 514-00000-01**

## Spare clamping sleeve

**P/N 23-30-01-05-31**



## Tubing

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

**P/N 591-35000-00**

## Tubing by meter (individual length)

**P/N 591-33000-01**



## Vacuum seal PTFE/FFKM

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

**P/N 23-30-01-06-70**

## Standard PTFE/FFKM spare seal

**P/N 23-30-01-01-30**



## 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

**P/N 569-00071-00**



## 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

**P/N 569-00065-00**



## 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

**P/N 569-00400-00**



## Heating bath liquid

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

**P/N 569-00600-0**



## AUTOaccurate-sensor

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

**P/N 569-00040-00**



## Vapor temperature sensor

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

**P/N 569-00030-00**

## 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)

**P/N 569-00200-00**

# 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 591-26000-00



# 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



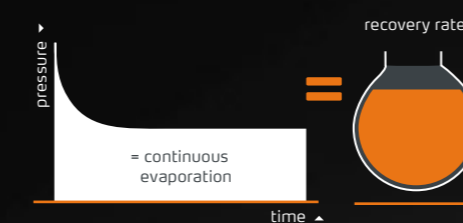
## Hei-VAC Control

### 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 591-00360-00

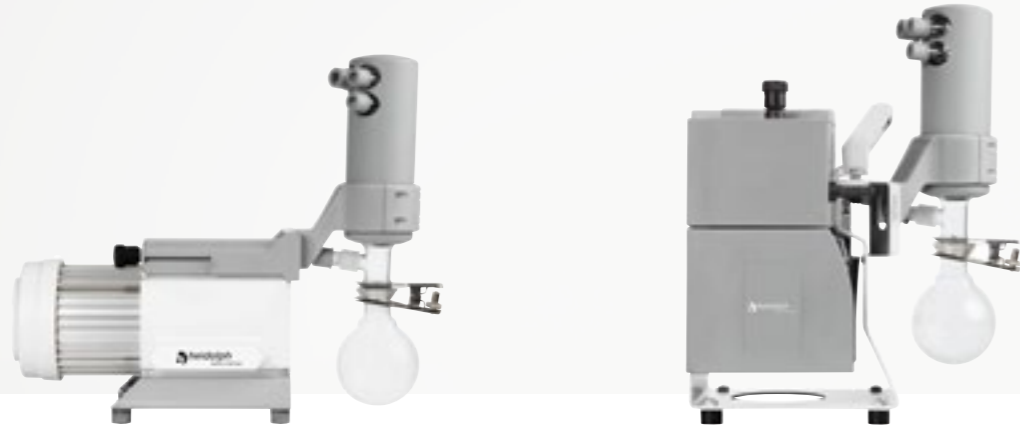
## Fully automatic control with speed adjustment



## 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 591-00160-00

### 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 591-00130-00

### Condenser

P/N 591-00083-00

	Rotavac Valve Tec	Rotavac Valve Control
Diaphragm pump	two-stage	two-stage
Suction capacity	0.75 m <sup>3</sup> /h	2.0 m <sup>3</sup> /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 145/315/169 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 591-00171-00

### 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 591-00141-00

### 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 591-00142-00

### Condenser

P/N 591-00084-00

	Rotavac Vario Tec	Rotavac Vario Control	Rotavac Vario Pumping Unit
Diaphragm pump	two-stage	three-stage	three-stage
Suction capacity	1.0 m <sup>3</sup> /h	1.7 m <sup>3</sup> /h	1.7 m <sup>3</sup> /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	193/263/299 mm

# Recirculating Chillers

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

**P/N 591-01600-00**

### Hei-CHILL 350

The compact design fits effortlessly on a laboratory bench, cooling capacity at 350 W

**P/N 591-01610-00**

### Hei-CHILL 600

With rollers for placement under a lab bench, cooling capacity at 600 W

**P/N 591-01620-00**

### Hei-CHILL 1200

With rollers for placement under a lab bench, cooling capacity at 1,200 W

**P/N 591-01630-00**



## Accessories

### Kryo 30 liquid

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

**P/N 569-00611-00**

20 l

**P/N 569-00610-00**

### RS 232 cabel

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

**P/N 14-007-040-72**



(No image)

### Enforced cooling tube

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

**P/N 591-38000-00**





# Technical specifications

## Chillers

	Hei-CHILL 250	Hei-CHILL 350	Hei-CHILL 600	Hei-CHILL 1200
<b>Weight</b>	28 kg	36 kg	52 kg	64 kg
<b>Display</b>	7-segment, LED	7-segment, LED	7-segment, LED	7-segment, LED
<b>Temperature range</b>	-10 – +40 °C	-10 – +40 °C	-10 – +40 °C	-10 – +40 °C
<b>Thermal fluid fill volume</b>	2–4 l	4–7 l	4–8 l	7–14 l
<b>Cooling capacity at +20 °C (20 °C ambient temp.)</b>	250 W	350 W	600 W	1,200 W
<b>Cooling capacity at 0 °C (20 °C ambient temp.)</b>	150 W	200 W	360 W	750 W
<b>Cooling capacity at -10 °C (20 °C ambient temp.)</b>	90 W	120 W	150 W	400 W
<b>Temperature accuracy</b>	±0.5K	±0.5K	±0.5K	±0.5K
<b>Digital interface</b>	RS 232	RS 232	RS 232	RS 232
<b>Noise level</b>	< 70 dB(A)	< 70 dB(A)	< 70 dB(A)	< 70 dB(A)
<b>Ambient temperature range (storage)</b>	5–40 °C	5–40 °C	5–40 °C	5–40 °C
<b>Pump pressure max.</b>	0.35 bar	0.35 bar	1.3 bar	1.3 bar
<b>Pump flow max.</b>	9 l/min	9 l/min	20 l/min	20 l/min
<b>Overvoltage category</b>	II	II	II	II
<b>Alarm output connection</b>	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
<b>Contamination level</b>	2	2	2	2
<b>Distance to surroundings (front and rear)</b>	40 cm	40 cm	40 cm	40 cm
<b>Classification according to DIN 12876-1</b>	I/NFL	I/NFL	I/NFL	I/NFL
<b>Refrigerant</b>	R-134a	R-134a	R-134a	R-134a
<b>GWP (100a) according to IPCC IV</b>	1430	1430	1430	1430
<b>Transportation temperature range</b>	-20 – +60 °C	-20 – +60 °C	-20 – +60 °C	-20 – +60 °C
<b>Cooling</b>	Air-cooled	Air-cooled	Air-cooled	Air-cooled
<b>Standard supply voltage</b>	230 V (50 Hz) or 115 V (60 Hz)	230 V (50 Hz) or 115 V (60 Hz)	230 V (50 Hz) or 115 V (60 Hz)	230 V (50 Hz) or 115 V (60 Hz)
<b>Rated power intake (230 V/115 V)</b>	230 W/230 W	500 W/ 500 W	700 W/750 W	1,100 W/1,150 W
<b>Cooling output</b>	250 W	350 W	600 W	1,200 W
<b>Dimensions</b> <b>w/d/h</b>	200×350×465 mm	240×400×500 mm	350×480×595 mm	450×550×650 mm
<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
<b>Protection class</b> <b>DIN EN 605291</b>	IP 32	IP 32	IP 32	IP 32

# Large-Scale Rotary Evaporators

