

Intelligent Evaporation



Leading Safety Standards

Superior Ease of Use

Reduced Cost of Ownership

 **heidolph** North America
research made easy



Do you demand the highest safety standards, perfectly engineered ease of use and reduced cost of ownership?

Intelligent Evaporation...

... stands for an overheat protection design that prevents water baths running dry, provides a detachable panel for superior ease of use from outside closed fume hoods and offers a proven vacuum seal and vapor tube system guaranteed for years of operation!



Leading Safety Standards

- Two independent safety circuits **avoid an overheat situation** of your heating bath: If bath temperature overshoots by 5 °C and if your water bath runs dry, heating will be switched off automatically
- To avoid** an overtemperature situation and potential **thermal damage** to your sample, you can individually pre-program a maximum temperature on the Hei-VAP Precision, at which the bath powers off
- In case of a power cut, all motor lift models will remove the flask from the heating bath **preventing safety hazards** and potential thermal damage to your sample
- To protect you from splashes and scalding**, the Hei-VAP heating bath features an integrated pour spout to remove bath fluid safely
- Heating bath is constructed with a **double wall** for your protection against burns and scalding
- The **guard hood covers the bath** even if the heating bath is adjusted horizontally to its most extreme limit
- A **metal guide** between the heating bath and the base unit **prevents bath instability**
- To **protect** your heating bath **against short-circuits and systematic corrosion**, the cable coupling complies with the protection class IP 67
- For your protection, the operating panel is located underneath a protective canopy so as to **keep your hands out of the dangerous zone** of rotating flasks, steam and splashing bath fluids
- All heating baths feature **non-slip handles** with safety grip to protect you from scalding bath liquids and allow for easy installation/removal of the bath
- A separate on/off switch for heating **prevents unintentional heat-up**. The button is illuminated for visual control
- In case of an overshoot of any parameter setting, all models will show a **warning on the operating panel**
- Glassware assemblies are optionally available with **transparent plastic safety coating** ensuring ultimate protection while allowing visual control at all times
- IQ-OQ documentation** is available for Hei-VAP models on request

Hei-VAP heating bath



YOUR ADVANTAGES

- The Hei-VAP heating bath reaches a temperature of 210 °C
- The universal heating bath can even accommodate 5-liter flasks
- The heating bath can be adjusted horizontally up to 200 mm
- To prevent short circuits and corrosion, the cable coupling complies with the protection class IP 67
- Non-slip handles for safe transportation eliminate the risk of scalding
- An integrated pour spout to remove bath fluid safely

Superior **Ease of Use**

- The detachable operating panel enables convenient handling from **outside closed fume hoods**
- The patented evaporating flask **clamp Easy-Clip cannot be lost** due to a connection to the vapor tube coupling ring
- The integrated screwed ring allows you to **remove sticking evaporating flasks** from the vapor tube **just in seconds** in a safe manner
- The universal heating bath can be adjusted horizontally up to 200 mm and offers efficient space to **accommodate even 5-liter flasks**
- The innovative ventilation and replenishment valves no longer have ground joints, which **enables maximum tightness, grease-free operation and prevents glass breakage**
- For your convenience, **the height of 160 mm and the angle of the evaporating flask can be adjusted easily from 20° to 80°**
- The optional automatic module Distimatic Bench-top allows for **continuous and unattended automatic operations**
- All components in direct or indirect contact with the medium are equipped with **FDA-compliant materials for an extended application range**



Reduced Cost of Ownership

- Achieve up to **40 % higher evaporation rates** due to unique tightness and industry-leading condensing surface with the **XL condenser**
- The high resistant and durable **PTFE vacuum seal achieves maximum tightness** and reduces spare part budgets
- The patented clamping sleeve ensures a **long life performance of the vapor tube**
- Increase your range of applications by using 5-liter flasks in the universal bath at **no additional cost**
- Maintenance-free and non-sparking motors **reduce repairs and down times significantly** to ensure years of continuous operation
- The flange on the condenser side of the drive is made of PPS (Polyphenylene sulfide), a robust industrial-designed resin with **superior chemical resistance** which provides more chemical resistance than stainless steel or welded aluminum. This reduces corrosion to a minimum which results in additional savings on maintenance and replacement components
- Spend your working hours more effectively on other challenges which require your attention and **evaporate large quantities continuously** with the automatic module Distimatic Bench-top
- Maximize your initial investment significantly: the automatic module Distimatic Bench-top is an **affordable and more flexible alternative** to large-scale rotary evaporators
- Reduce your maintenance costs. The sealed housing protects your rotary evaporator from aggressive fumes, liquids and vapors to prevent internal corrosion. This results in an **increased lifespan of 10 years** on average at a reduced maintenance and repair cost

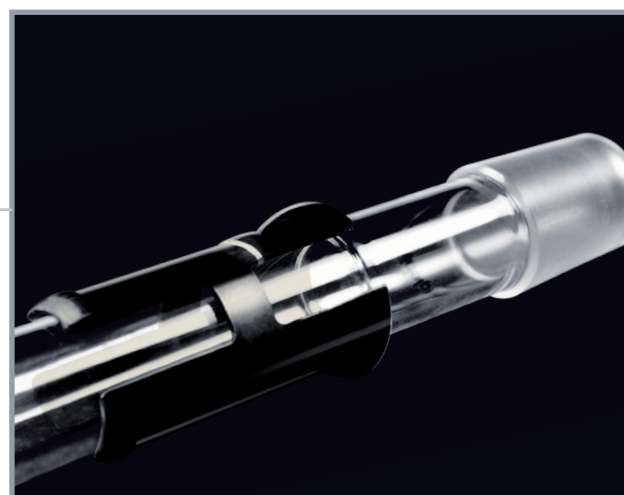
Intelligent Evaporation

Leading Safety Standards

Superior Ease of Use

Reduced Cost of Ownership

Vapor tube with patented clamping sleeve



YOUR ADVANTAGES

- The patented clamping sleeve system allows easy removal of the vapor tube from the drive
- Years of performance life reduce your spare parts budget up to 75 %
- The Hei-VAP vapor tube does not get stuck in the drive, thus eliminating the risk of broken glass
- Immediate removal of the vapor tube from the drive facilitates your work

Patented flask clamp Easy-Clip



YOUR ADVANTAGES

- Easy-Clip can't get lost due to a direct connection to the drive
- The integrated screw thread allows an easy removal of sticking flasks
- The Easy-Clip is made of highly resistant synthetic material which ensures a long life performance

Operating panel



YOUR ADVANTAGES

- Changing all parameters from outside closed fume hoods guarantees the highest safety level
- Standard for all models is a panel with 1 m cable connection. Thus data security is guaranteed at any time
- Immediate access to the panel ensures ultimate control of the process while increasing your ease of use
- A separate on/off switch for heating prevents unintentional heat-up – the button is illuminated for visual control

The average operational **lifespan of 10 years** is backed by a **3 year warranty** and makes your purchase a worthwhile investment.

New, FDA-compliant, transparent and uv-resistant tubing, with **higher chemical resistance**

Achieve **up to 40 % higher evaporation rates** due to tightness and industry-leading **2,200 cm²** condensing surface **with the XL condenser**

The new highly resistant PTFE vacuum seals allow for long lasting constant application and **reduce spare parts budgets**. Also available as FFKM version for application with extremely aggressive solutions

Superior ease of use due to the patented Easy-Clip, which provides an **easy removal of sticking flasks** and non-sticking vapor tube with patented clamping sleeve that **eliminates broken glass** and reduces spare parts cost significantly

210 °C Safety heating bath with handles and pour spout will power off if temperature overshoots by 5 °C or runs dry

The innovative ventilation and replenishment valves no longer have ground joints, which enables **maximum tightness, grease-free operation and prevents glass breakage**

The detachable operating panel enables **safe and easy handling** from outside closed fume hoods

For unlimited evaporation: In conjunction with the automatic module Distimatic Bench-top allows you unlimited and automated distilling in 24/7 operation. An affordable alternative to large-scale rotary evaporators

A separate on/off switch for heating **prevents unintentional heat-up** – the button is illuminated for visual control

A metal support between the heating bath and the base unit **prevents bath instability**

Bath power cable coupling complies with protection class IP 67 to **prevent corrosion and short circuits**

➤ Hei-VAP Value / Hei-VAP Value Digital

Superior ease of use due to direct control

The Hei-VAP devices with hand lift are optimally suited for all standard applications. Controlling parameters is done so with the simple turn of a knob



Hei-VAP Value Digital HL/G5B
P/N 036000073

Model	Hei-VAP Value hand lift (HL)		Hei-VAP Value Digital hand lift (HL)	
	standard	coated	standard	coated
G1 Diagonal	036000030	036000090	036000032	036000033
G3 Vertical	036000050	036000110	036000052	036000053
G3 XL Vertical	036000057	036000117	036000067	036000097
G5 Dry Ice Condenser	036000070	036000130	036000072	036000073
G6 Vertical for Reflux	036000140	036000141	036000142	036000143

➤ Hei-VAP Advantage

Wide range of possibilities for reproducible results

With the Hei-VAP Advantage you have a direct view on all parameter settings and are able to expand your application range



Upgrade-KIT
Advantage Precision-HL
P/N 036294700

Upgrade-KIT
Advantage Precision-ML
P/N 036294500

Hei-VAP Advantage ML/G3B
P/N 036000470

Model	Hei-VAP Advantage hand lift (HL)		Hei-VAP Advantage motor lift (ML)	
	standard	coated	standard	coated
G1 Diagonal	036000150	036000250	036000350	036000450
G3 Vertical	036000170	036000270	036000370	036000470
G3 XL Vertical	036000177	036000277	036000377	036000477
G5 Dry Ice Condenser	036000210	036000310	036000410	036000510
G6 Vertical for Reflux	036000230	036000330	036000430	036000530

➤ Hei-VAP Precision

Maximum capabilities due to integrated vacuum control

The Hei-VAP Precision provides you with the maximum range of parameters, including but not limited to, reproducible applications and fully automated processes. Even solutions with different boiling points can be identified and distilled

- Available in hand lift or motor lift configurations
- Experience the advantages of our large 4.3" color graphic display which features all parameters, integrated vacuum controller and includes programs for automated distillations
- Make your life easier by utilizing the integrated software support which leads you through the capabilities of the evaporator
- For data management Hei-VAP Precision models feature a USB interface
- Save time by configuring the unit - all connected devices will be recognized by the evaporator, which eliminates the need to configure the unit manually
- Now you can manage even the most demanding applications easily and prevent foaming, excessive bubbling or bumping
- Save time with your individualized pre-programmed parameter settings for your 30 most common applications used on a daily basis by saving them in a "Favorites" section
- Each ramp offers 20 separate steps for demanding applications
- Apply an individual name to those ramps to avoid a mix-up
- Experience the advantages of the automatic process timer which turns off your evaporator at a pre-programmed time by raising the flask on motor lift models and releasing vacuum
- Control your process individually by pre-programming vacuum gradients
- Hei-VAP Precision models feature a built-in vacuum controller as a standard



For increased safety all bath temperature adjustments can be limited

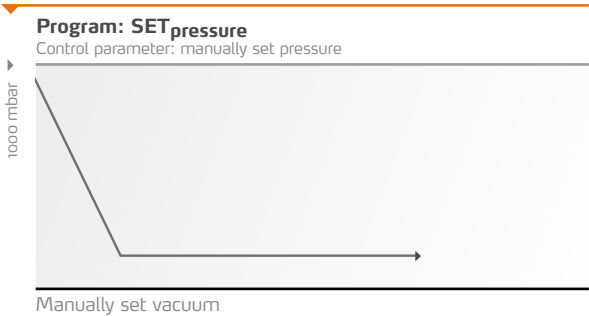
Even from a distance you will be able to monitor the numbers on the display easily

Large color graphic display for all parameters and automated programs

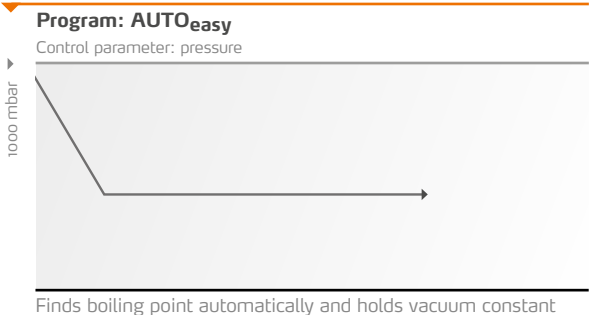
➤ Reduce your process times significantly via automated distillation programs

For automated distillation choose between these three programm opportunities:

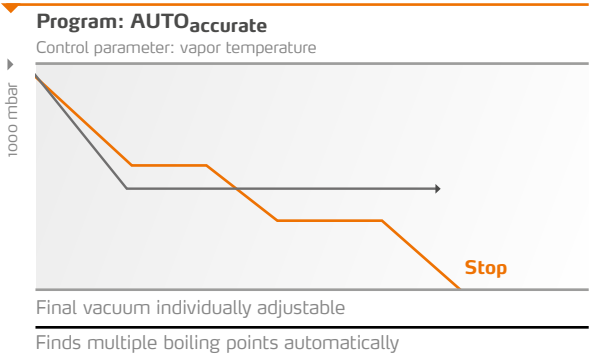
SET_{pressure}
Program for solvent separations
This program holds a pre-set vacuum constant. During the evacuation you have the full flexibility to choose another level of vacuum by the press of a button. Optionally, the process can be predefined via programmable ramps



AUTO_{easy}
Supports the automatic pressure control for solvent separations
The pressure level for the first boiling point is found automatically. This program can be used with all Heidolph glassware assemblies and does not require any accessories



AUTO_{accurate}
Supports very precise automatic pressure control for solvent separations
This program works similar to AUTO_{easy} but in addition is able to identify multiple boiling points automatically by reducing vacuum accordingly. Also the AUTO_{accurate} program delivers the finest and most precise vacuum control. To take advantage of this program, the optional AUTO_{accurate}-sensor is required. This program cannot be used on Heidolph G1 and G5 glassware assemblies. Leading parameter of this program is the vapor temperature



Model	Hei-VAP Precision hand lift (HL)		Hei-VAP Precision motor lift (ML)	
Glassware	standard	coated	standard	coated
G1 Diagonal	036000950	036001050	036001150	036001250
G3 Vertical	036000970	036001070	036001170	036001270
G3 XL Vertical	036000977	036001077	036001277	036001177
G5 Dry Ice Condenser	036001010	036001110	036001210	036001310
G6 Vertical for Reflux	036001030	036001130	036001230	036001330

➤ Glassware

- Glassware set includes one 1,000-ml evaporating flask and one 1,000-ml receiving flask
- All glassware sets are also available with transparent plastic coating for added safety ¹
- Evaporating flasks and vapor tube come standard with 24/40 joint size and also available with 29/32 ground joints
- Also available upon request: glassware sets for Soxhlet extraction and descending condenser system
- Innovative ventilation and replenishment valves without ground joints for easy handling and grease-free operation are included
- Glassware sets G3 and G6 allow for the automated distillation program AUTO_{accurate} on Hei-VAP Precision models

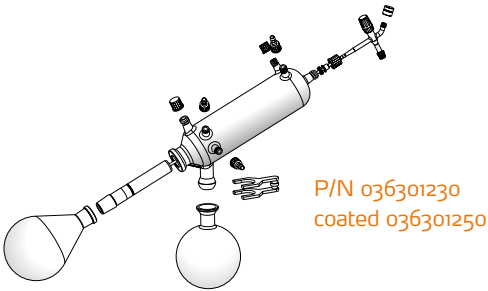
XL Condenser

For maximum evaporation performance

The new XL condenser with industry-leading condensing surface of 2,200 cm² achieve up to 40 % higher evaporation rates. Available in G3 XL, G3B XL and Gg ² XL versions

Glassware set G1

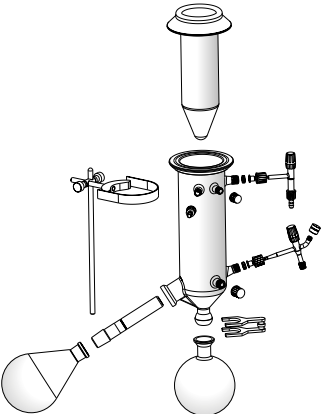
- Diagonal condenser for all standard distillations; the option with the **most affordable price**



P/N 036301230
coated 036301250

Glassware set G5

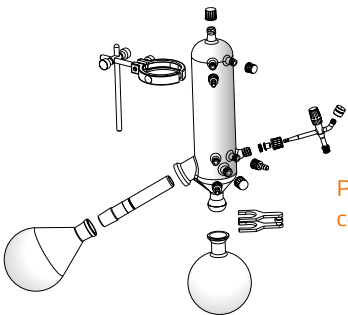
- **Dry Ice** condenser for low-boiling solvents



P/N 036301800
coated 036301820

Glassware set G3/G3 XL

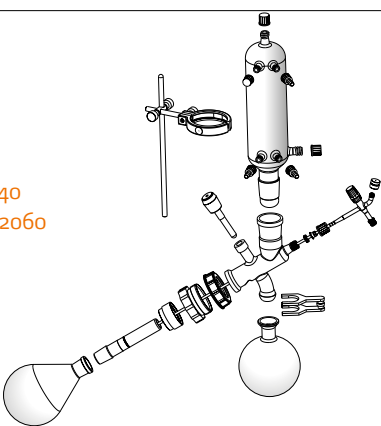
- Vertical condenser for all standard distillations; the option with the smallest space requirements, also available as XL version



P/N 036301410
coated 036301430

Glassware set G6

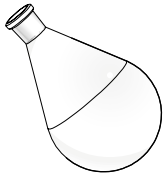
- Vertical condenser; centerpiece with valve **for reflux distillation**



P/N 036302040
coated 036302060

¹ Convenient for temperature range up to 80 °C
² for the usage of Deistimatic Bench-top

➤ Accessories



Evaporating flasks	NS 29/32	NS 24/40
Evaporating flask* 50 ml	036302280	036302270
Evaporating flask 100 ml	036302300	036302290
Evaporating flask 250 ml	036302320	036302310
Evaporating flask 500 ml	036302340	036302330
Evaporating flask 1,000 ml	036301150	036301160
Evaporating flask 2,000 ml	036302380	036302370
Evaporating flask 3,000 ml	036302400	036302390
Evaporating flask 5,000 ml	036305010	036305000

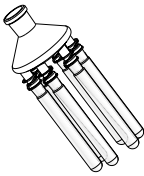
* Evaporating flask NS 14.5 incl. adaptor (NS 29 or NS 24)



Receiving flasks	standard	coated
Receiving flask - S 35/20 100 ml	036302480	036302490
Receiving flask - S 35/20 250 ml	036302500	036302510
Receiving flask - S 35/20 500 ml	036302520	036302530
Receiving flask - S 35/20 1,000 ml	036301170	036301180
Receiving flask - S 35/20 2,000 ml	036302570	036302580
Receiving flask - S 35/20 3,000 ml	036302590	036302600



Powder flasks	NS 29/32	NS 24/40
Powder flask 500 ml	036302220	036302210
Powder flask 1,000 ml	036302240	036302230
Powder flask 2,000 ml	036302260	036302250



Spider	NS 29/32	NS 24/40
Spider with 6 distillation sleeves NS 14,5 20 ml	036302620	036302610
Spider with 12 distillation sleeves NS 14,5 20 ml	036302640	036302630
Spider with 20 distillation sleeves NS 14,5 20 ml	036302660	036302650



Spider	NS 29/32	NS 24/40
Spider with 5 flasks NS 24 50 ml	036302760	036302750
Spider with 5 flasks NS 24 100 ml	036302780	036302770



Evaporating cylinder	NS 29/32	NS 24/40
Evaporating cylinder 500 ml	036302420	036302410
Evaporating cylinder 1,500 ml	036302440	036302430



Foam brake	NS 29/32	NS 24/40
Foam brake with flask clamp	036302460	036302470

➤ Accessories



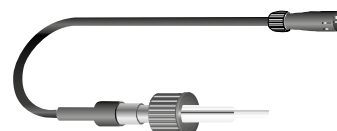
Guard hood
P/N 036305040

- Strong and transparent guard hood to protect you from implosions
- Provides easy and immediate access to flask and bath



Guard shield
P/N 036305050

- Strong and transparent guard shield for your protection while changing flasks
- Attached at the edge of the bath



Vapor temperature sensor
P/N 036308010

- For Hei-VAP Advantage and Hei-VAP Precision



AUTOaccurate-sensor
P/N 036308020

- For Hei-VAP Precision
- Only in combination with glassware set G3 and G6



Tubing
P/N 036302180 (package 12 m)
P/N 036294800 (by meter)

- Tubing for vacuum and water connection. Available as package (12 meter piece incl. hose clamps) or in individual length (by meter)
- Inner diameter: 8 mm
- Outer diameter: 13 mm



Vacuum seal
P/N 036210032 (PTFE/FKM)
P/N 036210033 (PTFE/FFKM)

- Standard PTFE / FKM spare seal
- Ultra resistant PTFE / FFKM seal for applications with highly abrasive solutions



Aqua-Stop
P/N 036302969

The integrated valve closes automatically by turning off the evaporator. The system saves money by reducing your consumption of cooling tap water. Moreover the safety mechanism avoids flooding in your laboratory. (Only for Hei-VAP Advantage and Hei-VAP Precision)



**Spare Part Set:
Hei-VAP Coupling NS24**
P/N 036280055

- Includes: 1x Coupling T68x3, 1x Tension Spring, 1x Clamping Sleeve, 1x Swing Clamp NS24

Spare vapor tube NS 24/40
P/N 036301110



Heating bath liquid
P/N 036300941

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

➤ Vacuum Pumps

Advantages of all chemical-resistant diaphragm vacuum pumps



- All components which come in contact with media are built from chemically resistant fluoropolymer
- The durable PTFE design guarantees an superior diaphragm lifespan
- The head cover and clamping disc have a stable core made of metal which offers unsurpassed long-term performance of your operational parameters
- The direct pump drive (without belt) is exceptionally quiet, creates a very low vibrational environment and reduces the need of wear and tear parts to a minimum
- The gas ballast valve has been optimized to prevent media condensing in the pump

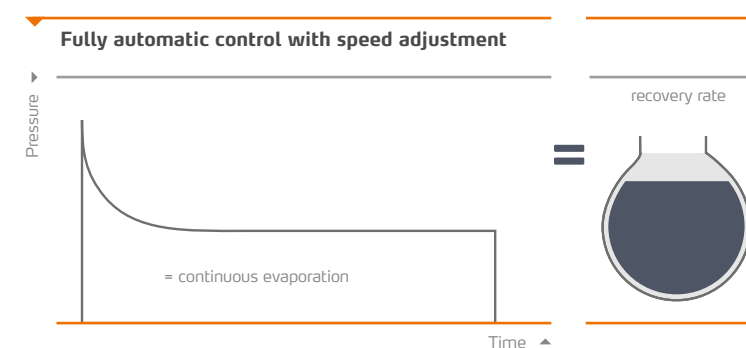
➤ RPM-Regulated Vacuum Pumps

➤ **Highest distillation rates possible and reducing process time by 30 %**

➤ **Stable distillation conditions account for solvent recovery up to 99 %**

YOUR ADVANTAGES

- Speed adjustment stops completely if vacuum is reached and runs intermittently at very low speed to hold vacuum constant
- Increased diaphragm performance life due to periods of non-operation
- Low energy consumption due to intermittent operation
- Significant noise and vibration reduction due to periods of non-operation
- Operates without vacuum valve
- Most precise vacuum level at all times



RPM regulated pumps adjust their speed individually when the required vacuum level is reached

➤ Valve-Regulated Vacuum Pumps

Standard vacuum pumps can be controlled manually or via valve operated vacuum controllers

	Rotavac Valve Tec	Rotavac Valve Control	Hei-VAC Pump
			
	■ Recommended for solvents with low or medium boiling points	■ Suction capacity for up to 3 rotary evaporators at the same time	■ Two-stage diaphragm pump
Part Number	036304780	036302830	036306570
Condenser Part Number	036304900	036304900	n/a
Optional Package choices	Valve-Tec w/ Manual Vacuum Controller P/N 036304781		
Can be combined with a condenser	Yes	Yes	No
Vacuum Control	Manual Vacuum Controller	Manual Vacuum Controller	Manual Vacuum Controller
Maximum Pumping Speed (m³/h)	0.75	2.0	1.3
Ultimate Vacuum (mbar)	12	7	2
Power input (W)	80	180	80
Weight (kg)	6.0	12.8	7.1
Dimensions (without condenser) (L x W x H) (mm)	145 x 315 x 169	195 x 245 x 310	326 x 143 x 175
Manual/Digital	Manual	Manual	Manual

PC510 NT



- Recommended for medium-sized vacuum applications involving common solvents

PC3001
Vario Pro



- Optimizes vacuum conditions automatically by precisely and continuously adjusting the diaphragm pump's motor speed

Part Number	036306562	036306581
Condenser Part Number	n/a	n/a
Can be combined with a condenser	No	No
Vacuum Control	CVC 3000	CVC 3000
Maximum Pumping Speed (m³/h)	2	2
Ultimate Vacuum (mbar)	7	2
Power input (W)	180	160
Weight (kg)	16.7	7.7
Dimensions (without condenser) (L x W x H) (mm)	419 x 243 x 444	300 x 306 x 400
Manual/Digital	Digital	Digital

➤ RPM-Regulated Vacuum Pumps

Standard vacuum pumps can be controlled manually or via valve operated vacuum controllers

	Rotavac Vario Pumping Unit	Rotavac Vario Tec	Rotavac Vario Control
			
	■ Three-stage diaphragm pump	■ Two-stage diaphragm pump	■ Three-stage diaphragm pump
	■ Precise vacuum control avoids bumping and eliminates foaming for your evaporation solution	■ Recommended for solvents with low or medium boiling points	■ 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 bath temperatures
	■ Due to automatic vacuum supply to the process parameter you have more time for important laboratory activities		

Recommended with Rotary Evaporator Model	Hei-VAP Value and Hei-VAP Advantage	Hei-VAP Precision	Hei-VAP Precision
Part Number	036308310	036308100	036308090
Condenser Part Number	036308110	036308110	036308110
Chemical-resistant	Yes	Yes	Yes
Can be combined with a condenser	Yes	Yes	Yes
Maximum Pumping Speed (m³/h)	1.7	1.0	1.7
Ultimate Vacuum (mbar)	5	12	2
Power input (W)	160	160	160
Weight (kg)	6	4.3	5.4
Dimensions (without condenser) (L x W x H) (mm)	263 x 193 x 156 x 236	156 x 236 x 196	167x 236x 196

ME1 Diaphragm Pump



	ME1 Diaphragm Pump
Part Number	036306604
Condenser Part Number	
Suction Capacity (m³/h)	85
Ultimate Vacuum (mbar)	100
Power input (W)	40
Weight (lb)	11
Dimensions (mm)	247 x 121 x 145

➤ Vacuum Accessories

Switchbox

Connect up to three rotary evaporators to one vacuum pump



Switchbox
P/N 036308080

- Connect up to to three rotary evaporators to one pump and control vacuum individually
- Pump switches off automatically at required vacuum
- Reduces energy consumption of pump
- Increases performance life of the pump due to a complete switch-off if vacuum is reached
- Vacuum valve and non-return valve are required for every evaporator if you work with different pressures at the same time
- Delivery includes three non-return valves
- Designed for Hei-VAP Precision
- Weight: 0.6 kg
- Dimensions: L80 / W160 / H45 mm

Manual vacuum controller

For Hei-VAP Value and Hei-VAP Advantage



Manual vacuum controller
P/N 036308000

- Control your house vacuum or any other vacuum source
- Pressure range from 0 to 1,020 mbar
- Scaling on display in steps of 50 mbar
- Connection for tubes with 8 mm inner diameter
- Support rod included
- A vacuum valve is not required
- Dimensions: L80 / W80 / H150 mm

Vacuum valve

Required to control vacuum for Hei-VAP Precision models with valve-regulated pumps



Vacuum valve
P/N 036308070

- External attachment design for easy cleaning
- Can be combined with the Woulff Bottle to one unit
- Not required if you utilize a Manual vacuum controller

Woulff bottle

P/N 036302940

- Additional recovery of solvent to protect vacuum valve and vacuum pump
- Compatible with all Hei-VAP configurations
- Direct connection to the vacuum valve is possible
- Features connection to vacuum controller
- Volume of 250 ml

➤ Chillers

Hei-Therm
RL-720M



- 1800 Viewing radius swiveling monitor enables screen view from any angle
- Several temp and interface options
- Intuitive large digital display

Rotachill



- Quick cool down times and small coolant volumes
- Small footprint to reduce lab space
- Temp/cooling capacity for any size evaporator

F250



- Environmentally-friendly operation with low energy consumption
- Compact design
- Splash-proof membrane keypad w/LED temp display

Rotachill Duo



- Quick cool down times and small coolant volumes
- Small foot print to reduce lab space
- Temp/Cooling capacity for any size evaporator

F1000



- Compact design
- Splash-proof membrane keypad w/LED Temp display
- Straight forward filling and draining
- Filling level indicator

Part Number	036500670	036306500	048100068	036306510	048100079
Recommended for 2 Evapo-rators	No	No	No	Yes	Yes
Working Temperature (C)	-20 to 135	-10 to 30	-10 to 40	-20 to 40	0 to 40
Max Pressure Flow Rate (l/ min)	12.8	13.2	15	13.2	23
Max Pressure (psi)	1.8	14.5	5.08	14.5	14.5
Cooling Capacity @ +200C (W)	200	420	250	1290	1000
Reservior Capacity (L)	7	2.65	2.6	2.65	9.5
Weight (kg)	38.052	27.7	27	27	44.9
Dimensions (without condenser) (L x W x H) (mm)	541 x 221 x 645	489 x 244 x 419	240 x 400 x 520	489 x 244 x 419	376 x 490 x 640

➤ Equipment Combinations

With the Hei-VAP series you can easily assemble your individual laboratory equipment - exactly to your requirements.

Please refer to the overview by Hei-VAP units for the possible configurations or contact us - we are happy to be at your service and will advise you in detail.

➤ Example configuration

Rotary Evaporator



Hei-VAP Advantage

Vacuum source



Rotavac Vario Pumping Unit



Accessories



- Vacuum controller
- Vapor temperature sensor (all glassware sets)
- Vacuum valve

- included** ➤ included in pumping unit, no further configuration required
- optional** ➤ optional available as accessory
- not required** ➤ not required due to rpm regulation

➤ Overview of Hei-VAP units

Rotary Evaporator



Hei-VAP Value / Hei-VAP Value Digital

Vacuum source

- Rotavac Vario Pumping Unit
- Rotavac Valve Control
- Rotavac Valve Tec
- House vacuum

- included** ➤
- not required** ➤

Accessories

- Vacuum controller
- Vacuum valve

- Manual vacuum controller

Hei-VAP Advantage



Hei-VAP Precision



- Rotavac Vario Pumping Unit
- Rotavac Valve Control
- Rotavac Valve Tec
- House vacuum

- included** ➤
- optional** ➤
- not required** ➤

- Vacuum controller
- Vapor temperature sensor (all glassware sets)
- Vacuum valve

- Manual vacuum controller
- Vapor temperature sensor (all glassware sets)

- Rotavac Valve Control
- Rotavac Valve Tec
- House vacuum

- included** ➤
- required** ➤
- optional** ➤

- Vacuum controller
- Vacuum valve
- Autoaccurate-sensor (glassware G3/G6 only)
- Vapor temperature sensor (all glassware sets)

- Rotavac Vario Control
- Rotavac Vario Tec

- included** ➤
- not required** ➤
- optional** ➤

- Vacuum controller
- Vacuum valve
- Autoaccurate-sensor (glassware G3/G6 only)
- Vapor temperature sensor (all glassware sets)

➤ Hei-Therm Circulator Baths

The Heidolph Hei-Therm circulator baths are designed to help scientists with their rigorous temperature control requirements. Each unit is designed to give optimal control, reproducibility, and an intuitive operator interface. Pick from 3 different interface controllers depending on your applications and data control requirements.

Open Bath Circulators

- Stainless steel or polycarbonate baths, sizes from 6 to 28 liters
- Heat/Chemical Resistant Cover Plate
- Rotating Display for Ease of Use
- Large and Easy to Use Display



	M immersion circulator	PC 8-M open bath circulator	PC-14M open bath circulator	PC-28M open bath circulator	SS-6M open bath circulator	SS-10M open bath circulator	SS-28M open bath circulator
Part Number	036500010	036500040	036500070	036500100	036500140	036500170	036500200
Working Temperature (C)	+10 to 135	+10 to 85	+10 to 85	+10 to 85	+10 to 135	+10 to 135	+10 to 135
Temp Stability (C)	+/- 0.07	+/- 0.07	+/- 0.07	+/- 0.07	+/- 0.07	+/- 0.07	+/- 0.07
Pump Type	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure
Pump Speeds	One	One	One	One	One	One	One
Reservior/Tank Material	Stainless Steel	Polycarbonate	Polycarbonate	Polycarbonate	Stainless Steel	Stainless Steel	Stainless Steel
Reservior Capacity (L)	28	8	14	28	6	10	28
Weight (kg)	4.53	7.248	10.872	25.368	9.06	17.667	29.898
Dimensions (without condenser) (L x W x H) (mm)	109 x 97 x 358	322 x 207 x 441	532 x 208 x 441	562 x 345 x 441	340 x 206 x 406	353 x 342 x 406	531 x 342 x 457

Heated Circulators

- 180° Viewing Radius Swiveling monitor enables screen view from any angle
- Intuitive large digital display with programmable Time vs. Temperature ramps on AP models
- Immersion cooling coil cutouts on Top Plate
- Compact design provides small footprint
- Heat/Chemical Resistant Top Plate DuraTop™



Heated Circulators

	HL-7M circulator	HL-15M circulator	HL-7AD circulator	HL-15AD circulator	HL-28AD circulator	HL-7AP circulator	HL-15AP circulator	HL-28AP circulator
Part Number	036500270	036500400	036500330	036500460	036500570	036500370	036500500	036500610
Working Temperature (C)	+10 to 135	+10 to 135	+10 to 200	+10 to 200	+10 to 200	+10 to 200	+10 to 200	+10 to 200
Temp Stability (C)	+/- 0.07	+/- 0.07	+/- 0.01	+/- 0.01	+/- 0.01	+/- 0.01	+/- 0.01	+/- 0.01
Pump Type	Pressure	Pressure	Pressure/ Suction	Pressure/ Suction	Pressure/ Suction	Pressure/ Suction	Pressure/ Suction	Pressure/ Suction
Pump Speeds	One	One	Variable	Variable	Variable	Variable	Variable	Variable
Reservior/Tank Material	Stainless Steel	Stainless Steel	Stainless Steel	Polycarbonate	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Included Software			PolyTemp Viewer, USB driver	PolyTemp Viewer, USB driver	PolyTemp Viewer, USB driver	PolyTemp Viewer, TDMS file viewer, USB driver, Excel Program Generator, PolyTemp Remote iPhone application	PolyTemp Viewer, TDMS file viewer, USB driver, Excel Program Generator, PolyTemp Remote iPhone application	PolyTemp Viewer, TDMS file viewer, USB driver, Excel Program Generator, PolyTemp Remote iPhone application
Reservior Capacity (L)	7	15	7	15	28	7	15	28
Weight (kg)	16.308	25.368	19.026	28.086	37.146	19.026	28.086	37.146
Dimensions (without condenser) (L x W x H) (mm)	499 x 221 x 437	569 x 368 x 452	499 x 221 x 409	569 x 368 x 422	672 x 457 x 422	499 x 221 x 409	569 x 368 x 422	672 x 457 x 422

Refrigerated Circulators

- 180° Viewing Radius Swiveling monitor enables screen view from any angle
- Heat/Chemical Resistant Top Plate DuraTop™
- Several temperature and interface options
- Intuitive large digital display with programmable Time vs. Temperature ramps on AP models
- Energy Efficient WhisperCool™ technology reduces noise and energy consumption



	RL-720M refrigerated circulator	RL-720AD refrigerated circulator	RL-1540AD refrigerated circulator	RL-2830AD refrigerated circulator	RL-720AP refrigerated circulator	RL-1540AP refrigerated circulator	RL-2830AP refrigerated circulator
Part Number	036500670	036500740	036500850	036500960	036500780	036500890	036501000
Working Temperature (C)	-20 to 135	-20 to 200	-40 to 200	-30 to 200	-20 to 200	-40 to 200	-30 to 200
Nominal Cooling Capacity @ +20C (W)	200	200	1000	915	200	1000	915
Temp Stability (C)	+/- 0.07	+/- 0.01	+/- 0.01	+/- 0.01	+/- 0.01	+/- 0.01	+/- 0.01
Pump Type	Pressure	Pressure	Pressure/ Suction	Pressure/ Suction	Pressure/ Suction	Pressure/ Suction	Pressure/ Suction
Pump Speeds	One	One	Variable	Variable	Variable	Variable	Variable
Reservior/Tank Material	Stainless Steel	Stainless Steel	Stainless Steel	Polycarbonate	Stainless Steel	Stainless Steel	Stainless Steel
Included Software			PolyTemp Viewer, USB driver	PolyTemp Viewer, USB driver	PolyTemp Viewer, USB driver	PolyTemp Viewer, TDMS file viewer, USB driver, Excel Program Generator, PolyTemp Remote iPhone application	PolyTemp Viewer, TDMS file viewer, USB driver, Excel Program Generator, PolyTemp Remote iPhone application
Reservior Capacity (L)	7	7	15	28	7	15	28
Weight (kg)	38.052	40.77	53.454	66.138	40.77	53.454	66.138
Dimensions (without condenser) (L x W x H) (mm)	541 x 221 x 645	541 x 221 x 617	569 x 368 x 683	672 x 457 x 683	541 x 221 x 617	569 x 368 x 683	569 x 368 x 683

➤ Technical Specifications - Rotary Evaporators

Model	Hei-VAP Value (HL) / Value Digital (HL)	Hei-VAP Advantage (HL)	Hei-VAP Advantage (ML)	Hei-VAP Precision (HL)	Hei-VAP Precision (ML)
Hand / Motor lift	hand lift	hand lift	motor lift	hand lift	motor lift
Height adjustment speed	manual	manual	30 mm/s	manual	30 mm/s
Height adjustment (mm)	155	155	155	155	155
Rotation speed (rpm)	10 – 280	10 – 280	10 – 280	10 – 280	10 – 280
Rotation speed setting	scale	3.5" LCD display	3.5" LCD display	4.3" LCD color graphic display	4.3" LCD color graphic display
Drive	brushless DC motor with electronic speed control				
Heating capacity (W)	1,300	1,300	1,300	1,300	1,300
Temp. range heating bath (°C)	20 – 210	20 – 210	20 – 210	20 – 210	20 – 210
Temperature accuracy bath (°C)	±1	±1	±1	±1	±1
Overheat protection bath (°C)	cut-off at 5 °C over set temperature via separate Pt 1000				
Bath temperature setting* * * *	scale / digital	3.5" LCD display	3.5" LCD display	4.3" LCD color graphic display	4.3" LCD color graphic display
Heating bath temperature control	electronic / digital	electronic / digital	electronic / digital	electronic / digital	electronic / digital
Secondary overtemp. cut-off (°C)	250	250	250	250	250
Material heating bath	stainless steel AISI 316L	stainless steel AISI 316L	stainless steel AISI 316L	stainless steel AISI 316L	stainless steel AISI 316L
Diameter heating bath (mm)	255	255	255	255	255
Volume heating bath (L)	4.5	4.5	4.5	4.5	4.5
Display vapor temperature required accessories	no	yes vapor temperature sensor	yes vapor temperature sensor	yes vapor temperature sensor	yes vapor temperature sensor
Integrated vacuum controller	no	no	no	yes	yes
Timer	no	yes	yes	yes	yes
Vacuum program SET _{pressure} **	no	no	no	yes	yes
Vacuum program AUTO _{easy} * *	no	no	no	yes	yes
Vacuum program AUTO _{accurate} ** requires AUTO _{accurate} -sensor	no	no	no	yes	yes
Remote control function					
- Lift	no	no	yes	no	yes
- Start rotation	yes	yes	yes	yes	yes
- Start vacuum	no	no	no	yes	yes
- Start heating bath	yes	yes	yes	yes	yes
Programmable ramps	no	no	no	yes	yes
Supply power (W)	1,400	1,400	1,400	1,400	1,400
Weight (w/o glassware assembly) (kg)	16	16	16	17	17
Dimensions with glassware set G3 (mm) Width on extended heating bath (l x w x h)	477 x max. 739 x 845	477 x max. 739 x 845	407 x max. 739 x 845	523 x max. 739 x 845	453 x max. 739 x 845
Dimensions with glassware set G3 XL (mm) Width on extended heating bath (l x w x h)	477 x max. 739 x 920	477 x max. 739 x 920	407 x max. 739 x 920	523 x max. 739 x 920	453 x max. 739 x 920
Protection class* * * (DIN EN 60529)	IP 20	IP 20	IP 20	IP 20	IP 20
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
Condensing surface (cm ²)	1,400	1,400	1,400	1,400	1,400
Condensing surface XL Condenser (cm ²)	2,200	2,200	2,200	2,200	2,200

Rate of evaporation* (L/h)	Toluene	Acetone	Ethanol	Isopropanol (IPA)	Water
G3 Vertical	6.5	6.0	2.5	4.0	1.4
G3 XL Vertical	8.5	7.5	3.5	4.9	1.4
Improvement with XL condenser (%)	31	25	40	23	system limit reached with 1.4 L/h

* With maximum condenser efficiency
** Only in combination with vacuum systems

*** IP 67 cable connection on heating bath
**** Hei-VAP Value Digital: digital display

Standard supply voltage: 230 V - other voltages upon request, please specify for order



Certificate

To confirm the ability for
continuous operation
of the Hei-VAP series Rotary Evaporators

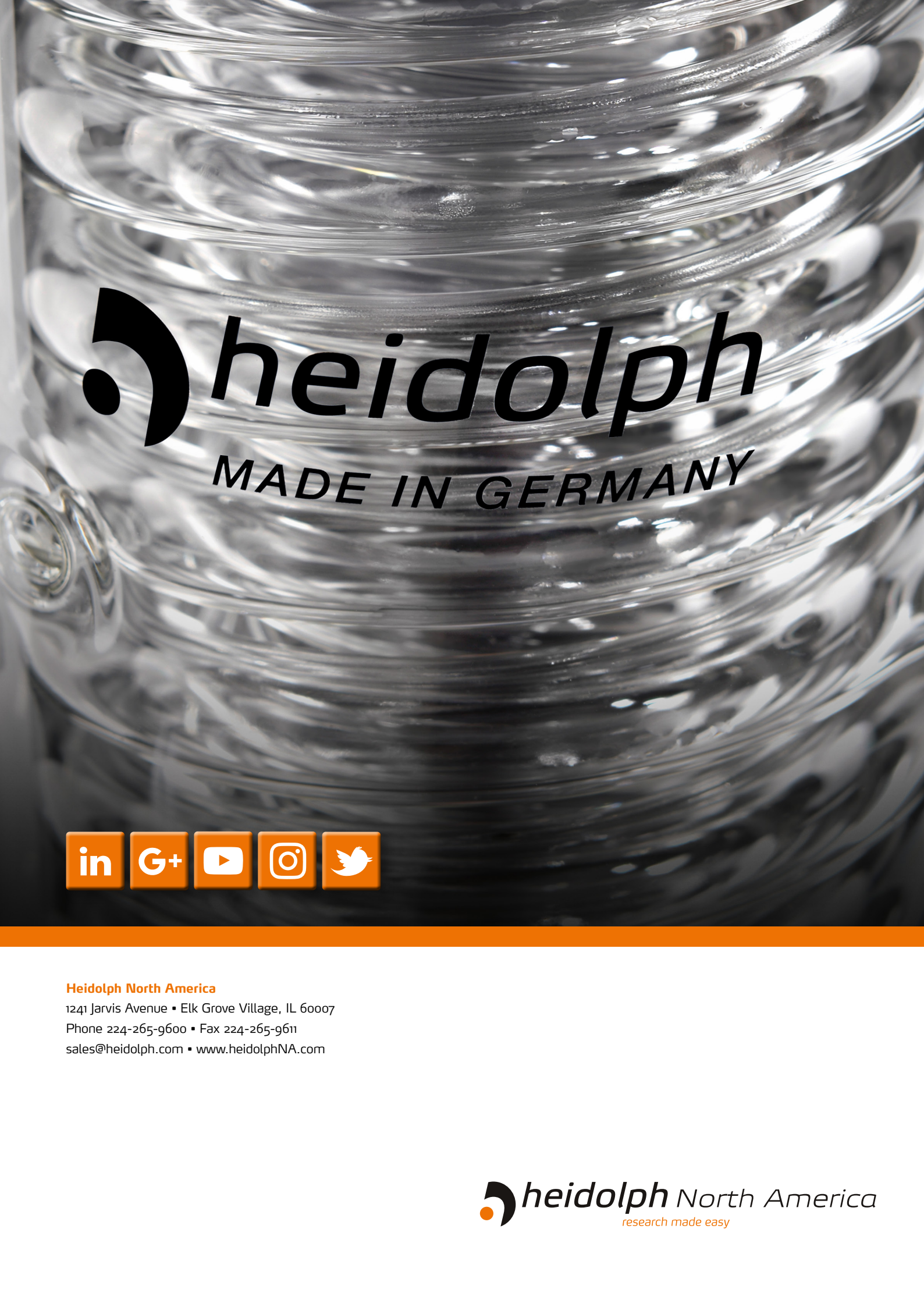
Hei-VAP series Rotary Evaporators feature overtemperature safety circuits according to DIN EN 61010-1:2001 and DIN EN 61010-2-010:2014 and therefore is designed for continuous operation.

This statement is made under the precondition that all units are operated in accordance with the operation manual and in accordance with good practice standards for safety in laboratories, rules for accident preventions, and compliance with directions on hazardous materials.

Schwabach, January 2018

Stefan Peters
Research and Development Manager

Marcell Sarré
Quality Manager



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MADE IN GERMANY



Heidolph North America

1241 Jarvis Avenue • Elk Grove Village, IL 60007

Phone 224-265-9600 • Fax 224-265-9611

sales@heidolph.com • www.heidolphNA.com

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