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IKA®

Thermostats



**designed
to work perfectly**

High-precision temperature control solutions

IKA® is proud to introduce several high-precision temperature control systems from +20 to +250 °C.

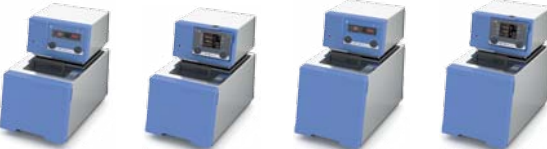
This wide product range consists of immersion circulators and heating bath circulators. This range of thermostats conform to safety classifications for use with flammable and non-flammable liquids according to DIN 12876. The sophisticated combination of precise technology and user-friendly design simplifies the temperature control of every application.

All models are available in basic and control versions in line with the IKA® portfolio. The integrated pressure/suction pump allows flexibility for internal and external applications. The large easy-to-read LED / TFT display, USB / RS 232 interface, connection to an external PT 100 temperature sensor and many other features present outstanding advantages in the world of thermostats.



Protection class according to DIN EN 60529: IP 21

Find the right thermostat for your application

-30 °C-20 °C-10 °C020 °C40 °C100 °C150 °C200 °C250 °C										IKA® devices		Heating / Cooling	Applications		Industries
IC basic IC control										 IC basicIC controlBridge Thermostats			> Thanks to the flexible bridge connection, IKA® IC immersion thermostats are suitable for all kinds of different water baths for volumes up to 100 l > For sample tempering > Analytics > Material testing		Serology Chemistry Analytics Material Testing Microbiology Biotechnology
IC basic IC control													> Internal and external applications > Including pump connection set > Including cooling coil for applications at or below ambient temperature > Tempering of biological material > Thermometer calibration > External tempering of measurement devices, measurement cells, photometers, refractometers and much more		Serology Chemistry Analytics Material Testing Microbiology
HBC 5 basic, HBC 10 basic HBC 5 control, HBC 10 control													> For external applications > Including cooling coil for applications at or below ambient temperature > Heating of double-walled > Thermometer calibration > Measurement of thermal conductivity > Corrosion tests > External tempering of autoclaves, photometers, refractometers and		Serology Biotechnology Chemical & Pharmaceutical industry
													Open: > Mainly internal applications* > Sample tempering > Tempering of biological material > Glassware heating Covered: Internal and external applications > Including pump connection set > Including cooling coil for applications at or below		Serology Chemistry Analytics Material Testing Microbiology
RC 2 basic, RC 2 control, RC 5 basic, RC 5 control															

IC basic & control | Highly powerful bridge thermostats



IC control

TFT Display

Large easy-to-read TFT display (only for control unit)

Removable wireless controller (WiCo) for easy and safe operation up to 10 m (only for control unit)

Integrated pressure / suction pump allows flexibility for internal and external applications

IKA+

Safety features

- > Adjustable safety circuit
- > Switch from internal to external temperature with one key (only for control unit)
- > Optical and acoustic warning e.g. for over heating



Flexible bath bridge enables easy mounting on different water bath sizes

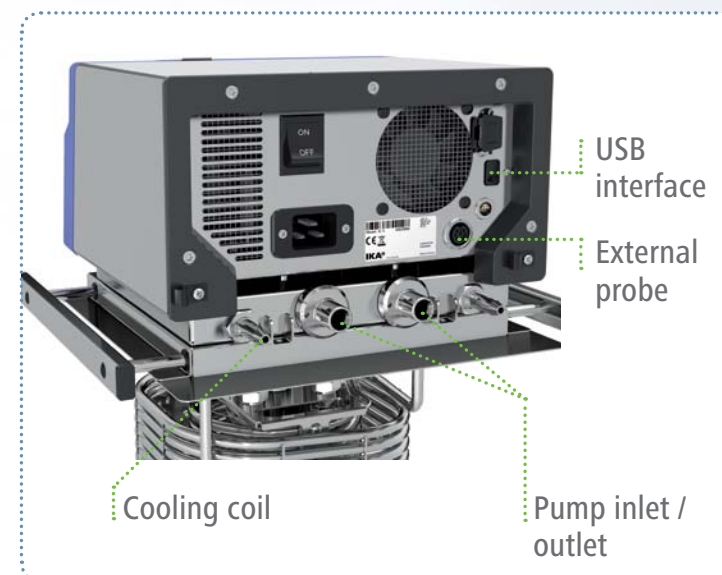


Connection port for external PT 100 temperature sensor



USB / RS 232 interface for PC control and documentation using labworldsoft® and for online firmware updates

IC basic



IKA+

Removable wireless controller (WiCo) for convenient and user-friendly operation!



The IC immersion circulators are designed for tempering liquids in open or covered water baths up to 250 °C. The flexible bath bridge enables easy mounting on different water baths. The IC control comes equipped with a removable wireless controller (WiCo) for easy and safe operation. The extended performance provides a solution for demanding applications in the analytics and material testing field.

Thermostats | IC Packages

IKA®+

Transparent baths are deep-drawn for superior stability

IKA® facilitates the configuration of your temperature control system by offering “ready for connection” packages with all necessary accessories. The only thing you have to do is to start heating up!

- 1

WiCo Controller
- 2

Level Indicator
- 3

Heating Coil
- 4

Cooling Coil
- 5

Bridge



Safety draining ports



IKA®+

To get customized packages for specific applications, please visit www.ika.de

The cooling coil integrated in the eco 18 c, pro 12 c and pro 20 c packages permits users to work up to 5 °C below ambient temperatures

	Package	Ident. No.
1	IC basic eco 18 c	0008036600
	IC basic Head	0004472600
	IB eco 18 Bath vessel, plastic	0004248200
	PT 100.30 Temperature sensor	0004284700
	CC 1 Cooling coil	0004365600
	CL.IC Cover	0004471800
	BS.IC Bridge	0004472800
2	IC basic pro 12 c	0008039900
	IC basic Head	0004472600
	IB pro 12 Bath vessel, stainless steel	0004577500
	PT 100.30 Temperature sensor	0004284700
	CC 1 Cooling coil	0004365600
	CM.IC Cover	0004577600
	BS.IC Bridge	0004472800
3	IC basic pro 20 c	0008036800
	IC basic Head	0004472600
	IB pro 20 Bath vessel, stainless steel	0004248600
	PT 100.30 Temperature sensor	0004284700
	CC 1 Cooling coil	0004365600
	CL.IC Cover	0004471800
	BS.IC Bridge	0004472800

	Package	Ident. No.
4	IC control eco 18 c	0008037000
	IC control Head	0004472700
	IB eco 18 Bath vessel, plastic	0004248200
	PT 100.30 Temperature sensor	0004284700
	CL.IC Cover	0004471800
	BS.IC Bridge	0004472800
5	IC control pro 12 c	0008040000
	IC control Head	0004472700
	IB pro 12 Bath vessel, stainless steel	0004577500
	PT 100.30 Temperature sensor	0004284700
	CM.IC Cover	0004577600
	BS.IC Bridge	0004472800
6	IC control pro 20 c	0008037200
	IC control Head	0004472700
	IB pro 20 Bath vessel, stainless steel	0004248600
	PT 100.30 Temperature sensor	0004284700
	CL.IC Cover	0004471800
	BS.IC Bridge	0004472800

HBC 5/10 | basic & control



HBC 10
basic /
control



Removable wireless controller (WiCo)
for easy and safe operation
(only for control unit)



USB / RS 232 interface for PC
control and documentation using
labworldsoft® and for online
firmware updates

HBC 5
basic /
control



Integrated handles
for easy carrying



Precise temperature
stability +/- 0.01 K



Optical and acoustic
warning function
e.g. for over heating



Integrated pressure / suction pump
allows flexibility for internal and
external applications



The remarkable temperature stability of +/- 0.01 K, the rapid heating-up times and the extended functions of the high-tech TFT display with wireless controller (WiCo) ensure that the HBC control series can be used for demanding and complex external laboratory applications.

Safe emptying of bath vessel without
getting hands on the hot surface



The high-quality stainless steel heating bath and the resistant housing are outstanding features of the HBC heating bath circulators.

The units can heat up to a maximum temperature of 250 °C; all radiators have large surface areas for efficient heat transfer, making warming of the medium extremely easy and reducing the risk of oil cracking.

IKA+

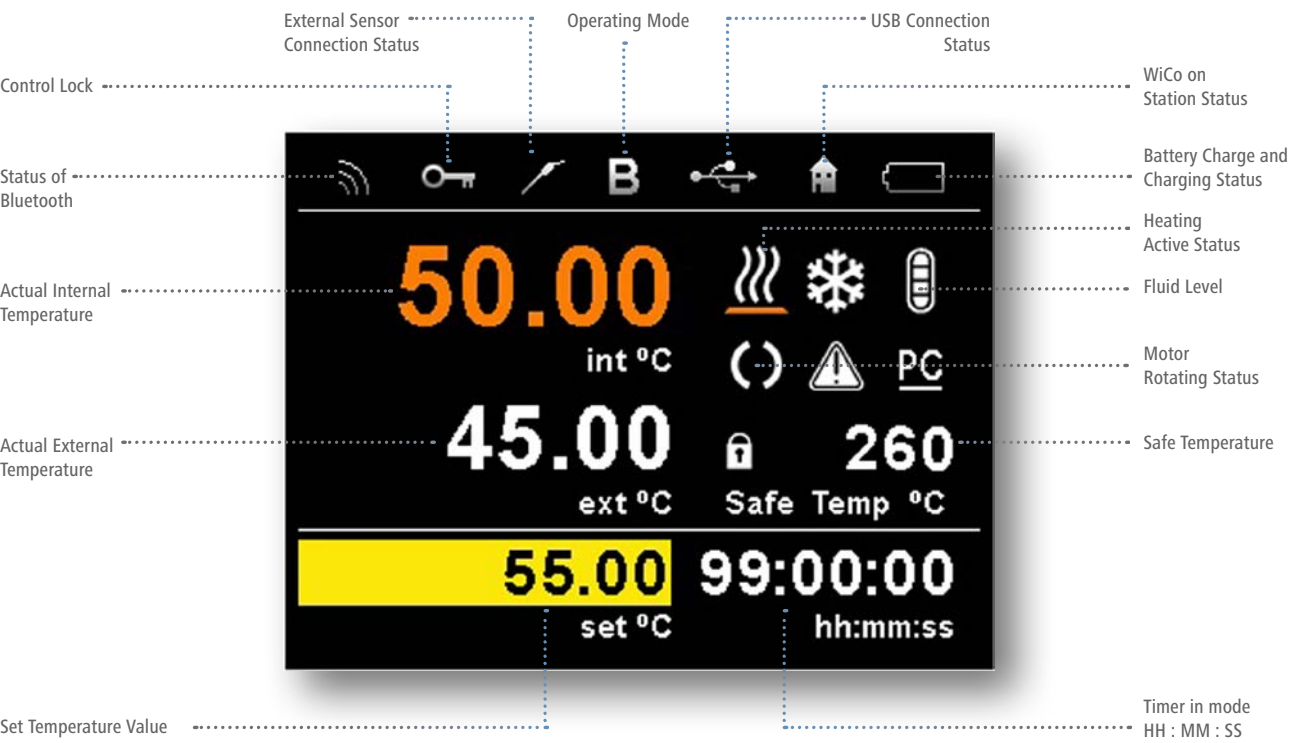
Safety features

- > Draining ports for safe emptying
- > Superior isolation for fast heating-up and improved heat exchange
- > Adjustable safety circuit
- > Switch from internal to external temperature with one key (only for control unit)
- > Optical and acoustic warning e.g. for over heating



Thermostats | Wireless technology

Main Screen



Programs

NEW PROGRAM				
Seg No.	Ctrl. Sensor	Temp.	Ctrl. Mode	Time hh:mm
1	ext	20.16	Time	92:15
2	int	30.03	Time	04:15
3	int	50.01	Time	00:00
4	ext	50.00	± 0.0 K	- : -
Edit	Delete	Insert	Save	

Graphs



Available in all control units



Easy monitoring and safe operation!

The wireless controller can be separated from the thermostat. This allows you to work under a fume hood without lifting the protective screen, which enhances user safety when working with volatile and/or toxic materials.





IC basic



IC control

Technical data		
Appliance type	immersion circulator	immersion circulator
Safety class	III (FL)	III (FL)
Heater capacity (230 / 115 V)	2500 / 1200 W	2500 / 1200 W
Temperature range	RT – 200 °C	RT – 250 °C (20 °C with cooling coil*)
Temperature display	LED	TFT
Temperature stability DIN 12876	± 0.02 K	± 0.01 K
Bath volume range	depends on used bath	depends on used bath
Max. flow rate (at 0 bar)	20 l/min	26 l/min
Max. pump pressure	0.5 bar	0.7 bar
Min. suction pressure	0.3 bar	0.4 bar
Dimensions (W x D x H)	245 x 260 x 300 mm	245 x 260 x 300 mm
Permissible ambient temperature	5 – 40 °C	5 – 40 °C
Permissible relative moisture	80%	80%
Protection class according to DIN EN 60529	IP 21	IP 21
USB / RS 232 Interface	yes	yes
External probe connection	yes	yes (probe included in the delivery)
Pump connection for external use	yes	yes
Cooling coil	optional	integrated

Ident. No. 0003861000

Ident. No. 0003863000



HBC 5 basic



HBC 5 control

Technical data		
Appliance type	heating bath circulator	heating bath circulator
Safety class	III (FL)	III (FL)
Heater capacity (230 / 115 V)	2500 / 1200 W	2500 / 1200 W
Temperature range	20 – 200 °C	20 – 250 °C (with integrated cooling coil*)
Temperature display	LED	TFT
Temperature stability DIN 12876	± 0.02 K	± 0.01 K
Bath volume range	5 – 7 l	5 – 7 l
Max. flow rate (at 0 bar)	20 l/min	26 l/min
Max. pump pressure	0.5 bar	0.7 bar
Min. suction pressure	0.3 bar	0.4 bar
Dimensions (W x D x H)	275 x 500 x 405 mm	275 x 500 x 405 mm
Permissible ambient temperature	5 – 40 °C	5 – 40 °C
Permissible relative moisture	80%	80%
Protection class according to DIN EN 60529	IP 21	IP 21
USB / RS 232 Interface	yes	yes
External probe connection	yes (probe included in the delivery)	yes (probe included in the delivery)
Pump connection for external use	yes	yes
Cooling coil	integrated	integrated

Ident. No. 0004125000

Ident. No. 0004127000



HBC 10 basic



HBC 10 control

Technical data		
Appliance type	heating bath circulator	heating bath circulator
Safety class	III (FL)	III (FL)
Heater capacity (230 / 115 V)	2500 / 1200 W	2500 / 1200 W
Temperature range	20 – 200 °C	20 – 250 °C (with integrated cooling coil*)
Temperature display	LED	TFT
Temperature stability DIN 12876	± 0.02 K	± 0.01 K
Bath volume range	8 – 13 l	8 – 13 l
Max. flow rate (at 0 bar)	20 l/min	26 l/min
Max. pump pressure	0.5 bar	0.7 bar
Min. suction pressure	0.3 bar	0.4 bar
Dimensions (W x D x H)	275 x 510 x 455 mm	275 x 510 x 455 mm
Permissible ambient temperature	5 – 40 °C	5 – 40 °C
Permissible relative moisture	80%	80%
Protection class according to DIN EN 60529	IP 21	IP 21
USB / RS 232 Interface	yes	yes
External probe connection	yes (probe included in the delivery)	yes (probe included in the delivery)
Pump connection for external use	yes	yes
Cooling coil	integrated	integrated

Ident. No. 0004135000

Ident. No. 0004137000

* Lower working temperatures possible with connection to a chiller

Basic and Control differentiation table

Features	Basic	Control
Display	LED	TFT
Robust stainless steel housing	✓	✓
Powerful pressure/suction pump	✓	✓
Infinitely variable speed control	✓	✓
USB / RS 232 Interface	✓	✓
Adjustable safety circuit	✓	✓
Optical and acoustic warnings	✓	✓
Connection port for ext. PT 100 temperature sensor	✓	✓
2+1 years warranty (after registration)	✓	✓
WiCo (Removable wireless controller)	✗	✓
Switch from internal to external temp. regulation with one key	✗	✓
10 User-defined programs with 10 steps	✗	✓
Control of external magnetic valve	✗	✓
Input for standby operation	✗	✓
Output for alarm	✗	✓
Safety switch for temperature indications	✗	✓
Increased maximum temperature	✗	✓
Increased accuracy	✗	✓
Increased pump pressure	✗	✓

Thermostats | Accessories



Water bath protective media

Name	Quantity	Ident. No.
AQ.1 Aquacide 1 protection against algae growth	1 l	0004568700

Tubing and hoses

Name	Temperature range	Length	Nominal width	Material	Ident. No.
1 H.PVC.8	-20...60 °C	1.5 m	8 mm	PVC	0004568800
2 H.PVC.12	-20...60 °C	1.5 m	12 mm	PVC	0004568900
3 H.SI.8	-40...180 °C	1.5 m	8 mm	silicone	0004569000
4 H.SI.12	-40...180 °C	1.5 m	12 mm	silicone	0004569100
5 H.PTFE.8	-60...180 °C	1.5 m	8 mm	PTFE	0004569200
6 H.PTFE.12	-60...180 °C	1.5 m	12 mm	PTFE	0004569300
LT 5.20	-100...350°C	1 m	12 mm	Metal	0002606700
LT 5.24 Hose adapter	-60...180 °C	R 1/8" x M 16 x 1	—	Metal	0002578100

Tubing Insulations

Name	Thickness	Inner Ø	Ident. No.
7 ISO.8	8 mm	13 mm	0004569400
8 ISO.12	12 mm	17 mm	0004569500

Covers

Name	Description	Ident. No.
CM.IC	Cover, medium for IC, 12 l bath vessels	0004577600
CL.IC	Cover, big for IC, 18 l / 20 l bath vessels	0004471800

Additional accessories

Name	Ident. No.
PT 100.30 Temperature sensor	0004284700
Length: 250 mm ; Max. temperature: 300 °C	
CC 1 Cooling Coil for IC	0004365600
MV 1 Magnetic valve	0004577800
COV 1 Closed pressure valve	0004577900
PC 2.3 Cable	0003036200

AVAILABLE 2014



Bath vessels



IB eco 18 transparent bath 18 l

Ident. No.
0004248200

IB pro 12 stainless steel bath 12 l

Ident. No.
0004577500

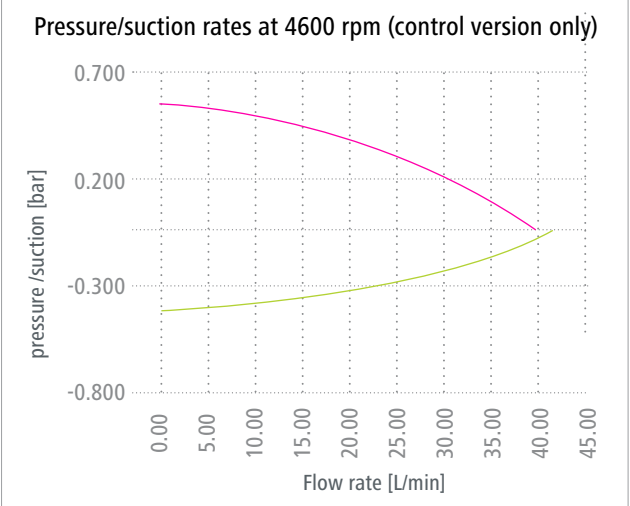
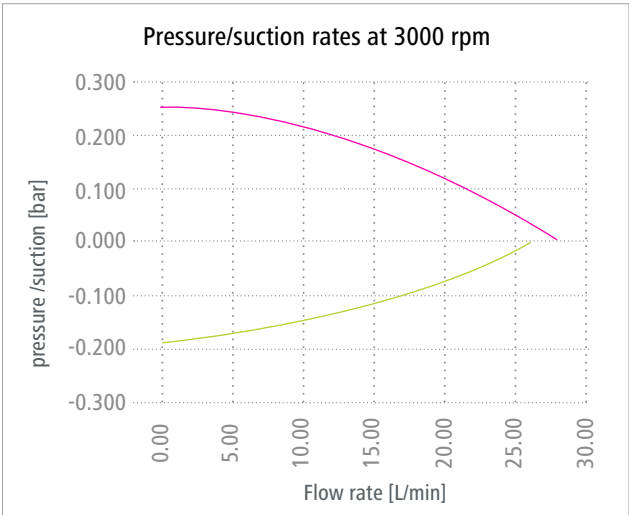
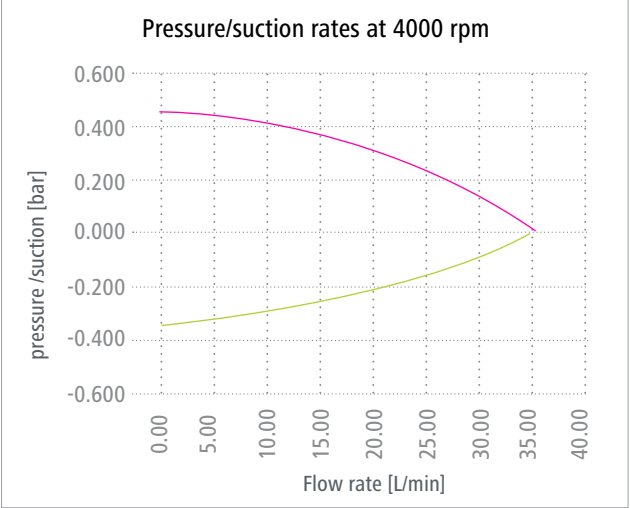
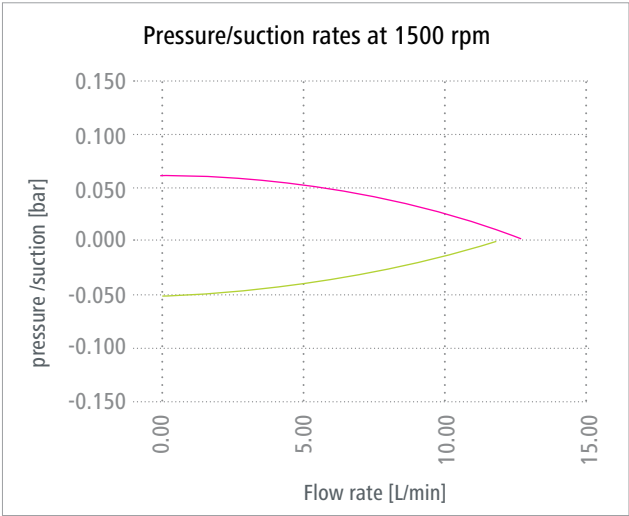
IB pro 20 stainless steel bath 20 l

Ident. No.
0004248600

Pump / heating curves

Pump performance curves

IKA® offers some of the finest pumps in the market. All IKA Thermostats come with powerful, long lasting pressure / suction pumps. Infinitely controlled pump speeds allow for high flow rates up to 35 l/min and liquid pressures of up to 0.6 bar (pressure) and 0.4 bar (suction)



Heating performance

When it comes to heating performance – IKA is on your side. We have 50+ years of experience of applying high precision temperature control into laboratory equipment.

Our new IKA Thermostats follow this proven history of excellence. Strong, powerful heating elements combined with excellent accuracy and stability of up to 0.01K fulfil the needs of even the most demanding users. Most of these units come with integrated cooling coils for counter cooling of dynamic processes as well. In addition, our entire thermostat range can be controlled by external temperature probes.

Our Thermostats are tested according DIN 12876-2 for absolute accuracy and unrivaled performance.

Heating times are dependant on several factors and below are some of the examples.

IC control with 20 l stainless steel bath and cover	
Target Temperature	150 °C
Medium	Silicone oil
Heating Time	28 min or 4.55K/min

HBC 5 basic	
Target Temperature	70 °C
Medium	Water
Heating Time	20 min or 2.0 K/min

HBC 10 control	
Target Temperature	70 °C
Medium	Water
Heating Time	20 min or 2.3 K/min

HBC 10 control	
Target Temperature	150 °C
Medium	Silicone oil
Heating Time	30 min or 4.19 K/min



labworldsoft®

IKA® laboratory software labworldsoft® is an advanced software for all your laboratory needs. With the help of this software, you can network up to 64 laboratory devices via one PC. All test parameters can be documented ensuring complete automation of your laboratory experiments. Measurements and processes may be run independently. Long waits and processing times are reduced, which increases productivity.



Comprehensive Worldwide Service!

Our dedicated team of engineers provides comprehensive worldwide technical service. Please feel free to contact your dealers or IKA® directly in case of any service queries. Hotline: In the event of an equipment malfunction or technical questions regarding devices and spare parts: call 00 8000 4524357 (00 8000 IKAHELP)



IKA® Application Support

Our Application Center spans 400 sqm and offers modern facilities for presenting and testing lab devices and processes. This brings us even closer to our customers and improves our service. Here, prospective buyers and customers can test out processes that involve stirring, shaking, dispersing, grinding, heating, analyzing and distilling. In addition, it also further extends the opportunity to test your own devices and to develop new models.



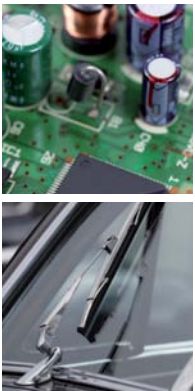
> Chemical & Pharmaceutical Industry

- Heating of double-walled laboratory reactors
- Compensation of exothermal and endothermal reactions
- Temperature control for chemical syntheses



> Automotive / Electronics Industry

- Material tests of electronic components
- Corrosion tests
- Measurement of thermal conductivity



> Biotechnology / Microbiology

- Tempering of biological material
- Cell Culture
- Incubation



> Food & Beverage

- Sample tempering in measuring cells
- Food Stability Testing
- Food Processing



> Analytics

- Cooling of external analytical equipment, for instance:
- Calorimeters
- Rotary Evaporators
- Viscosimeters



Application Support!

For questions regarding applications and processes, you can call our hotline number: 00 8000 4522777 (00 8000 IKAAPPS)*
E-Mail: applicationsupport@ika.de

* Monday – Thursday from 8:30 - 16:30
Friday from 8:30 - 15:30



Compact immersion circulators

- > Operating temperature up to 150 °C
- > Convenient carrying handle
- > Suitable for basic applications such as sample tempering and glassware heating



Refrigerated circulators

- > Operating temperature from -20 to +40 °C
- > Short cool-down times
- > Removable air grid for easy cleaning



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