

# IKA

designed for scientists

EN



BESTSELLER RELOADED | RCT basic



## Personalized Application Advice

At the IKA Application Center, you can see the performance of our magnetic stirrers for yourself. Our experts will show you the application and demonstrate the accessories.



## One service for everything, worldwide

The decision for a magnetic stirrer is also the decision for IKA's excellent technical service in your region. Our team is available worldwide for your service and application needs. IKA guarantees the availability of spare parts for your laboratory device for up to 10 years.

Do you have questions?  
Our service team is at your personal disposal:

00 8000 4524357 (00 8000 IKAHELP)

2+1 years warranty\*



\*2+1 years after registering at [www.ika.com/register](http://www.ika.com/register), wearing parts excluded.

## Newly designed

The first IKA magnetic stirrer was presented at the ACHEMA in 1950. It was a real crowd pleaser. RCT basic has now been our best-selling magnetic stirrer for many years. It is many things: the basis for inventions and developments, a popular entry-level model, a long-time companion and a constant favorite in the laboratory, and: it gives researchers security. That's why no one wants to give it away again. Not even us. But making it better? That's always possible, our developers and designers thought.

The proven rotary and push buttons enable the setting of the set values as well as start and stop of the main functions tempering and stirring.

Illuminated symbols provide information about the status of heating function, temperature sensor and set / actual temperature.

The main switch is located on the front of the unit and is easily accessible at all times.



The clear glass surface made of tempered, shatterproof glass provides high chemical resistance and is easy to clean.

The largest display in its class provides the best overview with the high-contrast LED display.

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/// MORE RELIABILITY

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/// MORE SAFETY

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/// ACCESSORIES



## Even more reliability

RCT basic will accompany you in the laboratory for decades:

- › It has a powerful and maintenance-free EC motor.
- › The surface is made of tempered and shatterproof safety glass, making it resistant to chemicals and easy to clean.
- › The housing is made of fireproof and robust die-cast aluminum with high quality powder coating.
- › Thanks to its enclosed design (protection class IP42), it can also be used under extreme conditions in the laboratory, for example when stirring cold samples.
- › The electronic connections on the back of the device are protected by the special design.



### Safety shutdown of the temperature control function

The signal sent by the sensor is automatically checked. For example, it is detected if the temperature sensor is not immersed in the medium or is defective. The time until the heating function is switched off can be set individually. The information is shown via a message in the display (Error 5).



## Even more safety



In accordance with the DIN EN 61010-2-010 standard, RCT basic meets all safety requirements for laboratory equipment for heating substances. The device monitors all safety-relevant components and is therefore suitable for unattended operation. User safety is guaranteed even if individual components fail. As a consequence, RCT basic not only carries the CE certification, but has also been tested and certified by TÜV SÜD.

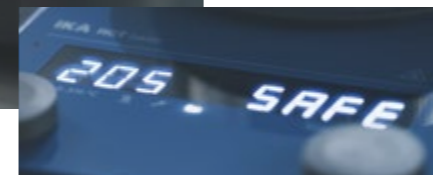


### Separate sensor for the safety temperature

In addition to the temperature sensors that measure directly in the sample and on the heating plate, there is an additional, independent sensor on the heating plate. This ensures that the critical temperature of the hotplate is not exceeded under any circumstances – even if the temperature sensor in the medium or in the heating element fails.

### Adjustable independent safety temperature

The safety temperature of the heating plate can be set with a tool independently of the set temperature and is monitored by separate electronics with its own temperature sensor. The set safety temperature is shown in the display.



### Hot surface warning

To protect against burns caused by the hot plate, the magnetic stirrer warns as soon as the residual heat of the hot plate exceeds a temperature of 50 °C when the heating function is deactivated. The warning is shown in the display even when the unit is switched off.

### Confirmation mode

The locking function in operating mode D prevents the unintentional change of the set speed and temperature values. In addition to each setpoint change, the set safety temperature must also be confirmed when the device is restarted.



## More features

The new RCT basic has numerous new features:

### Extended operating temperature range

Compared to the previous model, RCT basic offers an extended operating temperature range. With an external sensor connected, temperatures down to -20°C can be displayed.

### Considering sustainability

Best energy efficiency and lower self-heating thanks to perfect insulation of the heating plate, EC motor and electronic switching power supply.

### Ready for labworldsoft® 6

Integration into labworldsoft® 6 software for digital networking, monitoring and control.

### Improved temperature control

Two optimized temperature control modes ensure particularly fast heating or especially precise temperature control without overshooting.

### QR Code

Simply scan and go to device information, downloads, accessories, extended warranty. Or contact us directly.

## Technical data

### STIRRING

Max. stirring quantity (H <sub>2</sub> O)	20 l
Speed range	50 – 1500 rpm
Self-heating of the set-up plate by max. stirring (RT: 22°C / duration: 1h)	+13 K

### TEMPERING

Heat output	600 W
Heating temperature range	Room temp. + device self heating – 310 °C
Adjustable safety circuit	50 – 360 °C
Connection for ext. temperature sensor	PT1000* , ETS-D5, ETS-D6
Temperature measure range PT 1000	-20 – 310 °C

### GENERAL

Set-up plate dimensions	Ø 135 mm
Set-up plate material	Aluminium alloy
Dimensions (W x H x D)	160 x 85 x 270 mm
Weight	2,4 kg
USB / RS232 interface	Yes
Permissible ambient temperature	5 – 40 °C
Permissible relative humidity	80 %
Protection class acc. to DIN EN 60529	IP 42

\* Included in scope of delivery.



### RS232 and USB interfaces

Various interfaces for connection to a PC. For example, the magnetic stirrer can be safely controlled remotely.

## What remains

- › Long service life
- › Powerful motor
- › Excellent magnetic connection
- › Soft start to prevent magnetic stirring bars from breaking off during the startup phase
- › Heating plate made of aluminum for optimal and uniform heat transfer
- › Suitable for unattended operation
- › Upgrade possibilities due to compatibility with ETS-D contact thermometers



Ident. No.: 0010011525

## RCT basic ready-to-go Solution

The complete solution RCT basic ready-to-go contains all components for safe and effective sample temperature control:

The temperature sensor PT 1000 included in the scope of delivery of the RCT basic is mounted on the magnetic stirrer by means of holding rod H 38, stand rod H 16 V and boss head clamp H 44. For perfect positioning and clean cable routing, the holes for the stand rod are located on the left and right rear of the magnetic stirrer.

The BC 1000 beaker cap with feedthroughs for the temperature sensor fits flexibly on beakers with a volume of 600 or 1000 ml. The chemically highly resistant cover fulfills three functions at once: It is a splash guard, minimizes energy requirements when used as a lid, and reduces the noise that can occur when air is drawn in during rapid stirring.

### SCOPE OF DELIVERY

0025005927	RCT basic magnetic stirrer incl. PT 1000.60 Temperature sensor
0001545100	H 16 V Support rod
0002437700	H 44 Boss head clamp
0003547700	H 38 Holding rod
0020003417	BC 1000 Beaker cap



\* Attractive total price compared to the sum of individual prices.

## RCT basic Synthesis Solutions

The reaction block enables synthesis in round-bottom flasks at temperatures of up to 300 °C and replaces processes using sand and oil baths.

RCT basic  
**Synthesis Solution 250**  
 Ident. No.: 0010011505  
 RCT basic  
**Synthesis Solution 500**  
 Ident. No.: 0010011502  
 RCT basic  
**Synthesis Solution 1000**  
 Ident. No.: 0010011508

This system ensures optimum heat transfer from the hotplate directly into the medium. Magnetic stirring bars in an elliptical shape, which are adapted to the geometry of round bottom flasks, ensure perfect mixing. When switching from oil baths to IKA synthesis blocks, the risk potential can be significantly reduced and the handling and cleaning of the round-bottom flasks significantly simplified.

Thanks to interchangeable inserts (available as accessories), this complete solution is suitable for a wide range of applications.

### Applications:

- › Synthesis of / research on: pharmaceuticals (e.g. aspirin), pesticides (e.g. cyclopentadiene), dyes (e.g. fluorescein), surfactants (e.g. curd soap), plastics, catalysts, fragrances and flavorings (e.g. pentylester of acetic acid) and natural products (e.g. cellulose by the acetosolv process).
- › Laboratory synthesis of biodiesel (e.g. from rapeseed oil)
- › Grignard reactions
- › Synthesis of benzoic acid
- › Carrying out extractions
- › Evaporation of solids
- › Recrystallizations
- › Performance of simple distillations

### SCOPE OF DELIVERY

0025005927	RCT basic magnetic stirrer incl. PT 1000.60 Temperature sensor
0025003280	Flask carrier 250 ml
0025000639	or flask carrier 500 ml
0025000833	or flask carrier 1000 ml
0025000639	H 16 V Support rod
0025000833	H 44 Boss head clamp (2 pcs.)
0001545100	R 350 Universal clamp
0002437700	H 38 Holding rod
0004494800	Magnetic stirring bar IKAFLON 25 ellipse
0004495000	or IKAFLON 30 ellipse
0004495400	or IKAFLON 40 ellipse



\* Attractive total price compared to the sum of individual prices.

Ident. No.: 0010011496

## RCT basic ETS-D5 Solution

The ETS-D5 electronic contact thermometer makes your RCT basic even safer:

- › Additional safety monitoring: If a defined temperature value in the medium is exceeded, the magnetic stirrer switches to a safe state. The independent safety circuit for controlling the maximum temperature of the hotplate is of course maintained.
- › Temperature control accurate to a tenth of a degree
- › Additional display at eye level



\* Attractive total price compared to the sum of individual prices.

### SCOPE OF DELIVERY

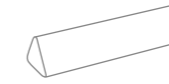
0025005927	RCT basic Magnetic stirrer
0003516800	ETS-D5 Contact thermometer
0001545100	H 16 V Support rod
0002437700	H 44 Boss head clamp
0003547700	H 38 Holding rod

## Accessories



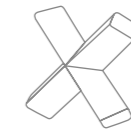
### IKAFLO 25 round (5 pcs.)

Dimensions (L x Ø): 25 x 8 mm.  
The round, cylindrical shape without pivot ring ensures uniform mixing.  
Ident. No.: 0004488900



### TRIKA 55 (5 pcs.)

Dimensions (L x Ø): 55 x 14 mm  
Suitable for mixing samples that are difficult to dissolve or to prevent sedimentation.  
Ident. No.: 0004499500



### IKAFLO 20 cross (5 pcs.)

Dimensions (L x Ø): 20 x 20 mm  
The cross shape creates deep turbulence for fast and efficient mixing.  
Ident. No.: 0004496400



### ETS-D5

Electronic contact thermometer with three patented operating modes. Ensures perfect temperature control in liquid mediums, without overshooting the set temperature, even in the case of quick heating.  
Ident. No.: 0003378000



**PT 1000.70** Temperature sensor, glass coated  
for work with aggressive media such as acid and alkaline solutions.  
Material: borosilicate glass 3.3  
Ident. No.: 0003736000



**PT 1000.90** Temperature sensor, coated  
Material: AISI 316 Ti, coated  
Ident. No.: 0004480600



**PC 1.1** Data cable  
Ident. No.: 0002616700  
**USB A-B** Data cable  
Ident. No.: 0004220200



**LABLIFT m**  
Manual laboratory lift for lifting and supporting small laboratory equipment or vessels. Max. dynamic load: 7 kg  
Ident. No.: 0004022400



**H 105** Cover, Material: silicone  
Ident. No.: 0025008136



**Synthesis attachments**  
or round-bottom flasks, with or without handle. Inserts for different volumes available separately.



**HG 1000** Heating jacket  
to improve heat transfer into the medium and reduce heating times.  
Ident. No.: 0003378000

Further accessories  
can be found at  
[www.ika.com](http://www.ika.com)



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#### GERMANY

IKA-Werke GmbH & Co. KG  
Janke & Kunkel-Straße 10, 79219 Staufen  
Phone: +49 7633 831-0, eMail: sales@ika.de

### /// WORLDWIDE

#### USA

IKA Works, Inc.  
Phone: +1 910 452-7059  
eMail: sales@ika.net

#### KOREA

IKA Korea Ltd.  
Phone: +82 2 2136 6800  
eMail: info@ika.kr

#### BRAZIL

IKA Brazil  
Phone: +55 19 3772-9600  
eMail: sales@ika.net.br

#### MALAYSIA

IKA Works (Asia) Sdn Bhd  
Phone: +60 3 6099-5666  
eMail: sales.lab@ika.my

#### CHINA

IKA Works Guangzhou  
Phone: +86 20 8222 6771  
eMail: info@ika.cn

#### POLAND

IKA Poland Sp. z o.o.  
Phone: +48 22 201 99 79  
eMail: sales.poland@ika.com

#### JAPAN

IKA Japan K.K.  
Phone: +81 6 6730 6781  
eMail: info\_japan@ika.ne.jp

#### INDIA

IKA India Private Limited  
Phone: +91 80 26253 900  
eMail: info@ika.in

#### UNITED KINGDOM

IKA England LTD.  
Phone: +44 1865 986 162  
eMail: sales.england@ika.com

#### VIETNAM

IKA Vietnam Company Limited  
Phone: +84 28 38202142  
eMail: sales.lab-vietnam@ika.com

#### THAILAND

IKA Works (Thailand) Co. Ltd.  
Phone: +66 86 375 7451  
eMail: sales.lab-thailand@ika.com

#### TURKEY

IKA Turkey  
Phone: +90 216 394 43 43  
eMail: sales.turkey@ika.com

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