Heating and Cooling Temperature Control Instruments

German technology made in the USA
IKA® offers a wide range of high-precision temperature control systems for temperature ranges of -20°C to 250°C.

The product portfolio includes immersion circulators, heating bath circulators and recirculating chillers. Precise technology and user-friendly design make temperature control easy for any application.

All models are available in basic and control versions. Even the basic version offers more features than most temperature control instruments already available in the market. All devices use an infinitely adjustable PEEK pressure and suction pump (up to 0.61 bar/31 l/min), making them suitable for universal use in internal and external temperature control applications in both open and closed baths. USB and RS 232 interfaces allow the user to control and monitor the device functions, e.g. with the IKA® software labworldsoft®. The ability to adjust the safety temperature and monitor the filling level status guarantees that the devices are safe to operate.

The control versions feature a unique wireless controller and can accommodate up to ten programs to facilitate customized procedures.

All IKA® temperature control instruments meet the highest standards in terms of safety, power and intelligence.
### IKA® Temperature Control Instruments

<table>
<thead>
<tr>
<th>Model</th>
<th>Heating/Cooling Power</th>
<th>Temperature Stability</th>
<th>Pump Power (bar)</th>
<th>Max. Flow Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBC 10 basic</td>
<td>2000 W</td>
<td>± 0.02 K</td>
<td>0.3 pressure 0.2 suction</td>
<td>18 l/min</td>
</tr>
<tr>
<td>HBC 10 control</td>
<td>2000 W</td>
<td>± 0.01 K</td>
<td>0.3 pressure 0.2 suction</td>
<td>18 l/min</td>
</tr>
<tr>
<td>HBC 5 basic</td>
<td>2500 W</td>
<td>± 0.02 K</td>
<td>0.45 pressure 0.35 suction</td>
<td>26 l/min</td>
</tr>
<tr>
<td>HBC 5 control</td>
<td>2500 W</td>
<td>± 0.01 K</td>
<td>0.61 pressure 0.45 suction</td>
<td>31 l/min</td>
</tr>
<tr>
<td>RC 2 basic</td>
<td>400 W</td>
<td>± 0.1 K</td>
<td>0.3 pressure 0.2 suction</td>
<td>18 l/min</td>
</tr>
<tr>
<td>RC 2 control</td>
<td>400 W</td>
<td>± 0.05 K</td>
<td>0.3 pressure 0.2 suction</td>
<td>18 l/min</td>
</tr>
</tbody>
</table>

#### Applications
- **Predominantly for internal applications**
- > Can be used universally in different baths
- > Tempering various samples, e.g. for analytical, material or food testing
- > For internal or simple external applications
- > Tempering various samples, e.g. in reagent bottles with fitted IKA® immersion racks
- > Includes a pump connection set also suitable for tempering small analytical devices or distillation equipment.
- > For demanding internal and external applications
- > Can be used universally in different baths due to the extendible bath bridge, e.g. for material testing in large open baths or for powerful external tempering of analytical devices or distillation equipment.
- > Powerful heating bath circulators for tempering external applications, e.g. double-walled laboratory reactors or distillation equipment.
- > When used in conjunction with IKA® accessories, the HBC series temperature control instruments can also be used for tempering large external open baths.
- > Determining temperature-dependent material constants, e.g. viscosity or thermal conductivity, in testing equipment that is temperature-controlled using a fluid medium.
- > Recirculating chiller for external applications
- > E.g. cooling rotary evaporators, calorimeters, incubating shakers, viscometers and polarimeters
- > Also suitable for external open baths when used with IKA® accessories

*Plastic baths (eco packages) can be used at temperatures of up to 100°C (H2O only)

*Stainless steel baths (pro packages) can be used at temperatures of up to 200°C

---

**IKA®** provides high-precision temperature control systems that offer exceptional value for money.

**3 Year Warranty**

* 2 years + 1 year after registration at www.ika.com/register, excludes wear parts

Visit our website for more information:

[www.ika.com](http://www.ika.com)
> All IKA® tempering products meet the highest safety standards

All of the devices meet the highest safety classification III (FL) for use with flammable liquids in accordance with DIN 12876.

> Safe handling due to ergonomic and well thought-out designs

- **Carrying handle**
  For safe carrying and positioning (ICC)

- **Recessed handles**
  For ergonomic carrying (HBC and RC 2)

- **Bracket**
  Secures the base and protects the floats and tubular heater (ICC)

- **Transport handle**
  For easy and safe handling (HBC)

- **Casters**
  Facilitate easy positioning of the device (RC 2)

> Safe operation

**Adjustable limit values:**

- **Temperature**
  The thermal fluid used can be selected in the menu. This ensures that the temperature remains outside the critical values for that fluid. Minimum and maximum temperatures can be manually adjusted within these limits.

- **Safety temperature**
  The safety temperature can be adjusted using tools and the display. The temperature is monitored by an independent temperature sensor.

- **Speed**
  The speed can be limited, which enables the user to define the maximum pump pressure.

**Additional safety features of the control devices:**

- Monitoring of the difference between internal and external temperature (adjustable)
- Maximum pressure easy to adjust/select
- Wireless controller (WiCo) enables safe and remote control of the devices, e.g. when having the device in a fume hood
- All important process parameters are neatly arranged and immediately visible

**Filling level detection**
A critical minimum or maximum level is recognized mechanically by the float and electronically by a temperature sensor.

**“Lock” function**
Locks the set parameters to prevent unintentional adjustment on the WiCo.

**Visual and acoustic alarm**
The user is informed of a critical fluid level, critical temperature or a blocked pump.
The IKA® tempering instruments control the temperature of liquids within a range of -20 °C to 250 °C.

**Wireless controller (WiCo)**

**Float for monitoring the filling level**

**Pipe heater**

**Cooling coil**

**Bridge**

---

**Pressure/suction pump**

The powerful, infinitely adjustable PEEK pressure/suction pumps enable the devices to be used flexibly in open or closed system applications. They guarantee effective mixing inside of the bath and provide a high flow rate for external applications.

All temperature control instruments come equipped with pump connectors (M16x1) or are suitable for retrofitting with pump connectors.

---

**Tempering**

For decades, temperature control has been one of IKA®’s core competencies.

IKA® heating temperature control instruments maintain a temperature consistency of up to ± 0.01 K. The output-regulated compressor of the RC 2 recirculating chiller facilitates a temperature consistency of 0.05 K.

The large heating surfaces gently control the temperature of the thermal fluids and ensure outstanding heat transfer.

The strong heat output of the circulators ensures short heat-up times.

A cooling coil is available for all IKA® temperature control instruments for use at or below ambient temperature or for connecting a chiller.

---

**Energy efficiency**

The excellent insulation and the demand-driven output control system ensure that IKA® temperature control instruments are very energy-efficient.

It is thanks to these features that the RC 2 recirculating chiller uses up to sixty percent less energy during standard operation than comparable devices from competitors.

---

**Robust and durable**

IKA® temperature control instruments are made from high-quality materials and are designed for a long service life.

Parts that come into contact with products are made of premium grade stainless steel and highly durable PEEK, FKM and PTFE, meeting the basic requirements for use in the food industry.
Temperature Control Instruments | Intelligence

> Connectivity

USB and RS 232 interface are standard
Software programs are used to gather the measurement data and control the devices, e.g. labwordsoft® by IKA®.

After registration, the Firmware Update Tool ensures that users always have the latest version of the software.

All control devices have a PT100 interface.

> Calibration and adjustment

The internal (and external, if used) temperature sensor can be adjusted either via a two-point or three-point calibration process.

> Automatic Tempering

Before the temperature is raised, the control parameters of the thermal fluid and the amount of thermal fluid are automatically measured in order to prevent the temperature from being exceeded. This can also be set manually using freely selectable PID control parameters.

> Software control/specification of heating rates

The labwordsoft® software can be used to precisely specify temperature ramps and heat-up times/heating rates.

> Operating mode choices

The user can set how the device should behave following a power failure or when it restarts.

> Intuitive operation

User-friendly menu navigation, push buttons and dial knobs make operation easy.

> Safely and entirely draining the baths

The thermal fluid can be fully drained from the bath in a simple and clean process. The physical separation of the drain valve and the opening screw ensures that the user does not come into contact with the fluid.

> Additional intelligent features of the control devices:

Clear and user-friendly display
All important process parameters are clearly arranged and are easy to read.
Users can view the display values, temperature setting, pump speed and safety temperature.
The device provides quick access to all important operation parameters.

Programming function
Ten freely programmable temperature programs, each with ten steps.

Degassing function
For reducing air pockets in oils.

Timer/counter

Smart heating
It is possible to reduce the heating output by up to 50% for longer heat-up times, to adapt the device to previous systems or to provide overload protection.

Smart activation of cooling coil

Audible signal when set temperature is reached.

Main screen

- Lock key
- Bluetooth enabled
- Actual Internal Temperature
- Pump on/off
- Actual External Temperature
- Target/ Set temperature
- Battery status display and charging status
- Heating on/off
- Fluid level display
- Connection made to the PC
- Safety temperature
- Run time display HH:MM:SS
The ICC basic and ICC control compact immersion circulators enable easy and flexible switching between different baths.

### Application example

The ICC immersion circulators can be equipped with an external pump connection set (PCS.ICC) and a cooling coil (CC2).

As shown in the picture, both components can be connected to a bath bridge or alternatively attached to the holding clamp (included in the delivery).

This extension enables the device to be used for external tempering or at/below ambient temperature.

![Image of holding clamp (included in scope of delivery)](image)

### More accessories

More accessories on page 28 (ff.)

---

**ICC basic & control | Compact Immersion Circulators**

The ICC basic and ICC control compact immersion circulators are designed for tempering liquids up to 150°C. They are an economical and attractive solution for standard applications, such as tempering samples. The convenient carrying handle and compact design mean the circulator is safe to transport and comfortable to use. The integrated brackets ensure the device is positioned securely while at the same time protecting the floats and tubular heating elements. A holding clamp (for attaching the circulator to a bath) is included in the delivery.

#### Technical specifications:

- **Heat output**: 2000 / 1000 W
- **Operating temperature range**: RT+10°C – 150°C
- **Max. flow rate (at 0 bar)**: 18 l/min
- **Pump power - pressure side**: 0.3 bar
- **Pump power - suction side**: 0.2 bar

#### Additional features:

- **USB/RS 232 interfaces for connecting a PC, using labworldsoft® and enabling online updates of device software**
- **Integrated pressure/suction pump for internal and external temperature control**
- **Convenient carrying handle**
- **Integrated PT100 interface**
- **Graphic display showing various parameters such as temperature, pump speed, etc.**

---

**> Pump characteristic curve:**

The pump characteristic curve allows the user to determine the maximum flow rate at a specific known loss of pressure in the test setup.
The IC and HBC temperature control products from IKA® are based on a modular design concept. The foundation of both devices is the IC head. The IC head is combined with a well-insulated bath to create the HBC (heating bath circulator). Both devices are designed for external tempering of complex applications.

**> Tempering:**
- Heat output: 2500 W
- Temperature range: up to 200°C (basic)/up to 250°C (control)
- Temperature stability: ± 0.02 K (basic)/0.01 K (control)
- Large heating element surface for optimal transfer

<table>
<thead>
<tr>
<th>IC / HBC basic</th>
<th>IC / HBC control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat output (230 / 115 V)</td>
<td>2500 / 1250 W</td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>RT + 10 °C - 200 °C</td>
</tr>
<tr>
<td>Max. flow rate (at 0 bar)</td>
<td>26 l/min</td>
</tr>
<tr>
<td>Pump power - pressure side</td>
<td>0.45 bar</td>
</tr>
<tr>
<td>Pump power - suction side</td>
<td>0.35 bar</td>
</tr>
</tbody>
</table>

**> Circulating/pumping**
The powerful pump achieves a high volume flow rate, resulting in a high level of heat exchange between the application and the circulating bath.

The pump characteristic curve allows the user to determine the maximum flow rate at a specific known loss of pressure in the test setup.

**> Pump characteristic curves:**

- **basic:**
  - Max. pressure: 0.45 bar
  - Max. flow rate: 26 l (at 0 bar)
  - Pressure/suction [bar]:
    - 0.2
    - 0.3
    - 0.4
    - 0.5
    - 0.6
  - Flow rate [l/min]:
    - 10
    - 15
    - 20
    - 25
    - 30

- **control:**
  - Max. pressure: 0.6 bar
  - Max. flow rate: 31 l (at 0 bar)
  - Pressure/suction [bar]:
    - 0.2
    - 0.3
    - 0.4
  - Flow rate [l/min]:
    - 10
    - 15
    - 20
    - 25
    - 30

**Safety and convenience features**
- Adjustable safety circuit
- Fluid level monitoring
- Visual and acoustic alarm
- Excellent temperature consistency
- PEEK pressure/suction pump
- Interface for PT100 temperature sensor
- RS 232 and USB are standard

Option to connect external solenoid valves via multi I/O port (IC/HBC control only)
- For the control of solenoid valves
  - For automatic refilling
  - For switching the cooling water circuit on/off
- For fluid level monitoring
- As an electronic stopcock
- Output for alarm signals
- Input for standby mode (for switching off the device)

Measurement in accordance with DIN 12876-2 with water at 20°C, closed pump circuit
The immersion circulator is suitable for both internal and external applications simultaneously. The set up shows the IC control tempering samples in tube racks. A level controller connects the IC to an external plastic bath, in which samples are also being temperature-controlled. The samples are mixed evenly by the IKA® RO 15 multi-position magnetic stirrer.

The IKA® IC immersion circulators are ideal for external applications, such as tempering an IKA® laboratory reactor. The setup below shows the IC control with stainless steel bath and cover (package pro 20 c), connected to an IKA® LR-2.ST laboratory reactor.

The IC immersion circulators are designed for tempering liquids up to 250 °C. Due to the flexible bath bridge, the device can be mounted on various baths. The control version features a removable controller (WiCo wireless controller), which can be used if the circulator is in a fume hood, for example. The advanced features enable the device to be used in demanding internal and external applications, such as analysis and materials testing.
HBC 5/10 basic and control | Heated Bath Circulators for external tempering applications

The well-insulated stainless steel heating bath and powerful PEEK pressure and suction pump are two of the key features of HBC heated bath circulators. Due to its high temperature consistency of up to ± 0.01 K, short heat-up times and the advanced features of the high-tech TFT display with detachable controller (WiCo), the HBC control heating bath circulator is the ideal solution for demanding and complex tempering processes.

**HBC 5 basic**
- Target temperature: 70°C, 2000 rpm
- Medium: Water (5.5 l)
- Heat-up time: 11 min or 5.2 K/min

**HBC 10 basic**
- Target temperature: 70°C, 2000 rpm
- Medium: Water (10 l)
- Heat-up time: 20 min or 2.5 K/min

Examples of heat-up times at room temperature (approximately 25°C)

The maximum temperature of the HBC heating bath circulators is 250°C for the control version (200°C for the basic version). The large surface of the tubular heating element ensures optimal heat transfer. The thermal fluid is heated gently and quickly.

Application example
The HBC heating bath circulator is ideal for external applications, for example the heating of double-walled laboratory reactors, such as the LR-2-ST from IKA.

- **HBC basic & control**
  - Visual and acoustic alarm
  - Integrated transport handle on the rear of the device, recessed handles for ergonomic transport
  - USB/RS 232 interfaces for connecting a PC, using labworldsoft® and enabling online updates of device software
  - Integrated pressure/suction pump for internal and external temperature control

- **HBC basic**
  - Detachable wireless controller (WiCo) for simple and safe remote access from up to 10m (30 ft.)

- **HBC control**
  - Higher target temperature, more powerful pump
  - Performance
  - Safety and convenience features
    - Ergonomic design
    - Excellent insulation for short heat-up times and improved heat transfer
    - Safety drain valve for easy draining
    - Adjustable safety circuit
    - Switch from external to internal temperature control at the press of a button (control model)

**AE**
RC 2 basic and control | Energy-efficient Recirculating Chillers

The RC recirculating chillers are designed to cool external analytical equipment quickly and efficiently. The chillers offer short cooling times at a temperature stability of ± 0.05 K for the control versions (± 0.1 K for the basic versions) and a working temperature range of -20 °C to room temperature.

The RC 2 control with wireless controller (WiCo) makes the device easy to operate remotely, enabling users to save space through the option of placing the chiller in a hard-to-reach area of the laboratory. Critical temperature control processes can be monitored and recorded, guaranteeing complete documentation of all measurement processes.

Handling
Safe and ergonomic handling due to a well thought-out design. Transport casters on the rear of the device enable easy transport and set up.

Energy efficiency
Up to sixty percent lower energy consumption during standard operation than comparable devices from competitors.

Large operating volume
The large difference between the maximum and minimum volume can be used as the operating volume for external tempering.

Control accuracy
The speed-regulated compressor provides better temperature stability of up to ± 0.05 K.

Silent mode
The fan only runs when needed.

Connection for PT100 temperature probe
Detachable wireless controller (WiCo) for simple and safe remote access from up to 10m (30 ft.)

Application example
The RC 2 recirculating chillers are ideal for cooling external analytical equipment such as laboratory reactors, calorimeters, incubating shakers or rotary evaporators. The set up below shows the RC 2 basic recirculating chiller connected to the IKA® C.1 calorimeter.

Safety and convenience features
- Robust stainless steel housing
- Visible fluid level display (screen and LED lights)
- Large funnel for easy refill
- Drain valve and optimized bath base for safe and thorough emptying
- Simple cleaning and maintenance due to the easily accessible air filter
- Overflow at the rear of the device
- Visual and acoustic alarm

The RC 2 basic and control
Measurement in accordance with DIN 12876-2 with water at 20 °C, closed pump circuit

Cooling power (at 20 °C) 400 W
 Operating temperature range - 20 °C - RT
 Max. flow rate (at 0 bar) 18 l/min
 Pump power - pressure side 0.3 bar
 Pump power - suction side 0.2 bar

Flow rate [l/min]
Pressure difference [bar]

Temperature Cooling output
+20°C 400 W
+10°C 370 W
 0°C 320 W
-10°C 240 W
-20°C 130 W

3200 rpm
1000 rpm
2000 rpm
5

AE
The intelligent and demand-driven control of the compressor and the condenser fan reduces the noise level in the laboratory to a minimum, particularly in the partial load range.

> Low noise level

Because of the innovative features of the RC 2, particularly the speed-controlled compressor, IKA has succeeded in reducing energy consumption by up to 60% in equivalent applications in comparison to devices from competitors (see application example).

> Energy savings

Because of the innovative features of the RC 2, particularly the speed-controlled compressor, IKA has succeeded in reducing energy consumption by up to 60% in equivalent applications in comparison to devices from competitors (see application example).

> Water savings

Calculated at an assumed average of six operating hours a day on 200 operating days a year, a rotary evaporator (50 l/h) cooled with tap water consumes 60,000 liters of water per year. This water can be saved when using a recirculating chiller, protecting the environment and reducing operating costs by up to EUR 240 a year (calculated using a cubic meter price of EUR 4).

Application example

Total distillation of 500 ml of diluted solution in the IKA® RV 10 control rotary evaporator connected to an IKA® RC 2 basic as a chiller. At a water bath temperature of 60 °C, a supply temperature of 20 °C and a cooling water volume flow rate of 50 liters per hour, the solution was completely distilled in the evaporator flask and the energy consumption of the chiller during this procedure was recorded. The energy consumed by the IKA® RC 2 chiller was then compared to the energy consumption of devices from competitors in otherwise identical test conditions.
## Technical Data

<table>
<thead>
<tr>
<th>Instrument Type</th>
<th>Safety Class</th>
<th>Heat Output (230 V)</th>
<th>Operating Temperature Range</th>
<th>Temperature Display</th>
<th>Display Resolution</th>
<th>Temperature Consistency in accordance with DIN 12876</th>
<th>Filling Volume</th>
<th>Pump Power– Pressure Side</th>
<th>Pump Power– Suction Side</th>
<th>Max. Flow Rate</th>
<th>Dimensions (W x H x D)</th>
<th>Permissible Ambient Temperature</th>
<th>Permissible Relative Humidity</th>
<th>Protection Class according to DIN EN 60529</th>
<th>USB/RS232 Interface</th>
<th>Connection for External PT100 probe</th>
<th>Connection for External Pump</th>
<th>Cooling Coil Included</th>
<th>Multi I/O Port Included</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EH4</strong></td>
<td>I (FL)</td>
<td>1500 W</td>
<td>25 – 100°C</td>
<td>LED (TFT)</td>
<td>± 0.12 K</td>
<td>± 0.02 K</td>
<td>± 0.01 K</td>
<td>Depend on the bath used</td>
<td>0.3 bar</td>
<td>0.2 bar</td>
<td>18 l/min</td>
<td>105 x 319 x 139 mm</td>
<td>5 – 40°C</td>
<td>80%</td>
<td>IP 31</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>**ICC basic</td>
<td>ICC control**</td>
<td>Compact immersion circulator</td>
<td>2000 W</td>
<td>RT+10°C – 150°C</td>
<td>± 0.1 °C</td>
<td>± 0.01 °C</td>
<td>± 0.02 K</td>
<td>0.01 K</td>
<td>0.1 bar</td>
<td>0.05 bar</td>
<td>26 l/min</td>
<td>285 x 313 x 291 mm</td>
<td>5 – 40°C</td>
<td>80%</td>
<td>IP 21</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>**IC basic</td>
<td>IC control**</td>
<td>Compact immersion circulator</td>
<td>2500 W</td>
<td>RT+10°C – 200°C</td>
<td>± 0.1 °C</td>
<td>± 0.01 °C</td>
<td>± 0.02 K</td>
<td>0.01 K</td>
<td>0.1 bar</td>
<td>0.05 bar</td>
<td>26 l/min</td>
<td>275 x 313 x 291 mm</td>
<td>5 – 40°C</td>
<td>80%</td>
<td>IP 21</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>**HBC 5 basic</td>
<td>control**</td>
<td>Immersion circulator</td>
<td>2500 W</td>
<td>RT+10°C – 200°C</td>
<td>± 0.1 °C</td>
<td>± 0.01 °C</td>
<td>± 0.02 K</td>
<td>0.01 K</td>
<td>0.1 bar</td>
<td>0.05 bar</td>
<td>26 l/min</td>
<td>275 x 416 x 106 mm</td>
<td>5 – 40°C</td>
<td>80%</td>
<td>IP 21</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>**HBC 10 basic</td>
<td>control**</td>
<td>Heated bath circulator</td>
<td>2500 W</td>
<td>RT+10°C – 200°C</td>
<td>± 0.1 °C</td>
<td>± 0.01 °C</td>
<td>± 0.02 K</td>
<td>0.01 K</td>
<td>0.1 bar</td>
<td>0.05 bar</td>
<td>26 l/min</td>
<td>275 x 456 x 106 mm</td>
<td>5 – 40°C</td>
<td>80%</td>
<td>IP 21</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Price**

- **HBC 5 basic | control** $ 2,109 | $ 2,649
- **HBC 10 basic | control** $ 2,225 | $ 2,735

**Ident No.**

- **EH4** 3164001
- **ICC basic | ICC control** 0020002270 | 0020002273
- **IC basic | IC control** 3861001 | 3863001
- **HBC 5 basic | control** 4125001 | 4127001
- **HBC 10 basic | control** 4135001 | 4137001

**Temperature Control Instruments**
### Technical Data

<table>
<thead>
<tr>
<th>Instrument type</th>
<th>RC 2 basic</th>
<th>RC 2 control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recirculating chiller</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Cooling power (at 20°C)</td>
<td>400 W</td>
<td>400 W</td>
</tr>
<tr>
<td>Temperature display</td>
<td>0 °C</td>
<td>0 °C</td>
</tr>
<tr>
<td>Display resolution</td>
<td>0.1 °C</td>
<td>0.1 °C</td>
</tr>
<tr>
<td>Temperature consistency in accordance with DIN 12876</td>
<td>± 0.1 K</td>
<td>± 0.05 K</td>
</tr>
<tr>
<td>Filling volume</td>
<td>2 l</td>
<td>2 l</td>
</tr>
<tr>
<td>Pump power – suction side</td>
<td>0.2 bar</td>
<td>0.3 bar</td>
</tr>
<tr>
<td>Max. flow rate</td>
<td>18 l/min</td>
<td>22 l/min</td>
</tr>
<tr>
<td>Dimensions (W x H x D)</td>
<td>220 x 475 x 525 mm</td>
<td>220 x 475 x 525 mm</td>
</tr>
<tr>
<td>Permissible ambient temperature</td>
<td>5 – 32°C</td>
<td>5 – 32°C</td>
</tr>
<tr>
<td>Permissible relative humidity</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>Protection class according to DIN EN 60529</td>
<td>IP 23</td>
<td>IP 23</td>
</tr>
<tr>
<td>USB/RS232 interface</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Connection for external PT100 probe</td>
<td>yes</td>
<td>yes*</td>
</tr>
<tr>
<td>Connection for external pump</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Cooling coil included</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Multi I/O port included</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

| Price | $ 2,529 | $ 2,837 |

* PT 100 probe included

---

### Included with Product

<table>
<thead>
<tr>
<th>Included</th>
<th>ICC basic</th>
<th>ICC control</th>
<th>IC basic</th>
<th>IC control</th>
<th>HBC basic</th>
<th>HBC control</th>
<th>RC 2 basic</th>
<th>RC 2 control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pump connection set</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cooling coil</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PT100 interface</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>External PT100 probe</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>USB interface</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>RS 232 interface</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Multi I/O interface</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>USB cable (station)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>USB cable (WCU)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Charger for wireless controller</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Power cable</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Olives for DN 12 hoses (2x)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Olives for DN 8 hoses (2x)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Ident No. 4171001

Ident No. 4173001

* PT 100 probe included

---

Temperature Control Instruments | Technical Data

Temperature Control Instruments | Included with Product

---

26

27
### Accessories | Baths and Covers

<table>
<thead>
<tr>
<th>Name</th>
<th>Bath type</th>
<th>Bath size</th>
<th>Outer dimensions</th>
<th>Inner dimensions</th>
<th>Ident No.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>IB 8 eco</td>
<td>Plastic bath, 8 l</td>
<td>S</td>
<td>335 x 320 x 155 mm</td>
<td>286 x 227 x 150 mm</td>
<td>4248100</td>
<td>$ 648</td>
</tr>
<tr>
<td>IB 12 eco</td>
<td>Plastic bath, 12 l</td>
<td>M</td>
<td>461 x 354 x 195 mm</td>
<td>317 x 282 x 150 mm</td>
<td>4577500</td>
<td>$ 138</td>
</tr>
<tr>
<td>IB 18 eco</td>
<td>Plastic bath, 18 l</td>
<td>L</td>
<td>584 x 338 x 205 mm</td>
<td>490 x 286 x 150 mm</td>
<td>4248200</td>
<td>$ 171</td>
</tr>
<tr>
<td>IB 20 eco</td>
<td>Plastic bath, 20 l</td>
<td>S</td>
<td>640 x 365 x 176 mm</td>
<td>504 x 317 x 151 mm</td>
<td>4248500</td>
<td>$ 180</td>
</tr>
<tr>
<td>IB R 9 eco</td>
<td>Stainless steel bath, 9 l</td>
<td>S</td>
<td>722 x 365 x 165 mm</td>
<td>674 x 317 x 98 mm</td>
<td>0020006341</td>
<td>On request</td>
</tr>
<tr>
<td>IB 12 pro</td>
<td>Stainless steel bath, 12 l</td>
<td>M</td>
<td>461 x 354 x 195 mm</td>
<td>317 x 282 x 150 mm</td>
<td>4577500</td>
<td>$ 138</td>
</tr>
<tr>
<td>IB 20 pro</td>
<td>Stainless steel bath, 20 l</td>
<td>L</td>
<td>641 x 354 x 195 mm</td>
<td>405 x 282 x 150 mm</td>
<td>4248600</td>
<td>$ 171</td>
</tr>
</tbody>
</table>

**Bath vessels**

**Information:** eco - water, 100°C | pro - water, oil, 100°C

### Accessories | Immersion Racks

<table>
<thead>
<tr>
<th>Name</th>
<th>Suitable sample vessels</th>
<th>Max. number of samples</th>
<th>Packaging unit</th>
<th>Ident No.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floating tube rack 1</td>
<td>15 ml</td>
<td>24</td>
<td>5 pieces</td>
<td>0020003667</td>
<td>$ 35</td>
</tr>
<tr>
<td>Floating tube rack 2</td>
<td>50 ml</td>
<td>8</td>
<td>5 pieces</td>
<td>0020003668</td>
<td>$ 35</td>
</tr>
<tr>
<td>Floating tube rack 3</td>
<td>100 ml</td>
<td>4</td>
<td>5 pieces</td>
<td>0020003669</td>
<td>$ 35</td>
</tr>
</tbody>
</table>

**Floating racks**

For ident No.: 20004612, 20004614, 20006572, 20006753

<table>
<thead>
<tr>
<th>Name</th>
<th>Suitable sample vessels</th>
<th>Max. number of samples</th>
<th>Packaging unit</th>
<th>Ident No.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS 2.1 fixing clip 25 ml</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AS 2.2 fixing clip 50 ml</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AS 2.3 fixing clip 100 ml</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AS 2.4 fixing clip 200/250 ml</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AS 2.5 fixing clip 500 ml</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Fixing clips**

<table>
<thead>
<tr>
<th>Name</th>
<th>Ident No.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS 2.1 fixing clip</td>
<td>1234500</td>
<td>$ 23</td>
</tr>
<tr>
<td>AS 2.2 fixing clip</td>
<td>1234400</td>
<td>$ 23</td>
</tr>
<tr>
<td>AS 2.3 fixing clip</td>
<td>1234300</td>
<td>$ 23</td>
</tr>
<tr>
<td>AS 2.4 fixing clip</td>
<td>1234200</td>
<td>$ 43</td>
</tr>
<tr>
<td>AS 2.5 fixing clip</td>
<td>1234100</td>
<td>$ 43</td>
</tr>
</tbody>
</table>

**Fixing clips**

<table>
<thead>
<tr>
<th>Name</th>
<th>Ident No.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS 2.1 fixing clip 25 ml</td>
<td>1234500</td>
<td>$ 23</td>
</tr>
<tr>
<td>AS 2.2 fixing clip 50 ml</td>
<td>1234400</td>
<td>$ 23</td>
</tr>
<tr>
<td>AS 2.3 fixing clip 100 ml</td>
<td>1234300</td>
<td>$ 23</td>
</tr>
<tr>
<td>AS 2.4 fixing clip 200/250 ml</td>
<td>1234200</td>
<td>$ 43</td>
</tr>
<tr>
<td>AS 2.5 fixing clip 500 ml</td>
<td>1234100</td>
<td>$ 43</td>
</tr>
</tbody>
</table>

---

**Accessories | Immersion Racks**

<table>
<thead>
<tr>
<th>Name</th>
<th>Suitable sample vessels</th>
<th>Max. number of samples</th>
<th>Packaging unit</th>
<th>Ident No.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floating tube rack 1</td>
<td>15 ml</td>
<td>24</td>
<td>5 pieces</td>
<td>0020003667</td>
<td>$ 35</td>
</tr>
<tr>
<td>Floating tube rack 2</td>
<td>50 ml</td>
<td>8</td>
<td>5 pieces</td>
<td>0020003668</td>
<td>$ 35</td>
</tr>
<tr>
<td>Floating tube rack 3</td>
<td>100 ml</td>
<td>4</td>
<td>5 pieces</td>
<td>0020003669</td>
<td>$ 35</td>
</tr>
</tbody>
</table>

**Floating racks**

For ident No.: 20004612, 20004614, 20006572, 20006753

<table>
<thead>
<tr>
<th>Name</th>
<th>Suitable sample vessels</th>
<th>Max. number of samples</th>
<th>Packaging unit</th>
<th>Ident No.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS 2.1 fixing clip 25 ml</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AS 2.2 fixing clip 50 ml</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AS 2.3 fixing clip 100 ml</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AS 2.4 fixing clip 200/250 ml</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AS 2.5 fixing clip 500 ml</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Fixing clips**

<table>
<thead>
<tr>
<th>Name</th>
<th>Ident No.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS 2.1 fixing clip</td>
<td>1234500</td>
<td>$ 23</td>
</tr>
<tr>
<td>AS 2.2 fixing clip</td>
<td>1234400</td>
<td>$ 23</td>
</tr>
<tr>
<td>AS 2.3 fixing clip</td>
<td>1234300</td>
<td>$ 23</td>
</tr>
<tr>
<td>AS 2.4 fixing clip</td>
<td>1234200</td>
<td>$ 43</td>
</tr>
<tr>
<td>AS 2.5 fixing clip</td>
<td>1234100</td>
<td>$ 43</td>
</tr>
</tbody>
</table>

---
Thermal Fluids

- Chemical basis
  - Silicon (Si)

- Thermal fluid type
  - Heating fluid (HF)
  - Universal fluid (UF)

- Minimum/maximum temperature
  - UF. Si. N20.150. 20 LV
  - Additional information
    - Low viscosity (LV)
    - Contains additives (A)

- Viscosity
  - UF. Si. N20.150. 20 LV
  - Temperature
    - 20 – 250°C
  - Viscosity at 25°C
    - 50 mm²/s
  - Color
    - Reddish translucent
  - Qty.
    - 10 kg
  - Price
    - $8

- Hose insulation

Thermal Fluids

- Heating fluids
  - HFSi.20.250.50A
  - Temperature range: 20 – 250°C
  - Viscosity at 25°C: 50 mm²/s
  - Color: Reddish translucent
  - Qty.: 10 kg
  - Price: $8

- Universal fluid
  - UF.Si.150.10.10
  - Temperature range: 20 – 200°C
  - Viscosity at 25°C: 50 mm²/s
  - Color: Clear
  - Qty.: 10 kg
  - Price: $8

- Hose insulation for DN 8 hoses, 1.5 m, 2 pcs.
  - ISO.8
  - Price: $8

- Hose insulation for DN 12 hoses, 1.5 m, 2 pcs.
  - ISO.12
  - Price: $10

Temperature Control Hoses

- Packaging units
  - 2

- Length
  - 1.5 m

- Material
  - PVC

- Ø external [mm]
  - 8 | 12

- Ø internal [mm]
  - 8 | 12

- Connection
  - For hose olive

- Temperature range
  - -20 – 60°C

- Color
  - Transparent

- Price
  - $3

- Hose insulation for DN 8 hoses, 1.5 m, 2 pcs.
  - ISO.8
  - Price: $8

- Hose insulation for DN 12 hoses, 1.5 m, 2 pcs.
  - ISO.12
  - Price: $10

- Hose insulation for DN 8 hoses, 1.5 m, 4 pcs.
  - ISO.8
  - Price: $10

- Hose insulation for DN 12 hoses, 1.5 m, 4 pcs.
  - ISO.12
  - Price: $12

- Hose insulation for DN 8 hoses, 1.5 m, 1 pc.
  - ISO.8
  - Price: $5

- Hose insulation for DN 12 hoses, 1.5 m, 1 pc.
  - ISO.12
  - Price: $5

- Temperature range
  - -20 – 60°C

- Color
  - Milky-transparent

- Price
  - $3

- Hose insulation for DN 8 hoses, 1.5 m, 2 pcs.
  - ISO.8
  - Price: $8

- Hose insulation for DN 12 hoses, 1.5 m, 2 pcs.
  - ISO.12
  - Price: $10

- Hose insulation for DN 8 hoses, 1.5 m, 4 pcs.
  - ISO.8
  - Price: $10

- Hose insulation for DN 12 hoses, 1.5 m, 4 pcs.
  - ISO.12
  - Price: $12

- Hose insulation for DN 8 hoses, 1.5 m, 1 pc.
  - ISO.8
  - Price: $5

- Hose insulation for DN 12 hoses, 1.5 m, 1 pc.
  - ISO.12
  - Price: $5

- Temperature range
  - -20 – 60°C

- Color
  - Milky-transparent

- Price
  - $3

- Hose insulation for DN 8 hoses, 1.5 m, 2 pcs.
  - ISO.8
  - Price: $8

- Hose insulation for DN 12 hoses, 1.5 m, 2 pcs.
  - ISO.12
  - Price: $10

- Hose insulation for DN 8 hoses, 1.5 m, 4 pcs.
  - ISO.8
  - Price: $10

- Hose insulation for DN 12 hoses, 1.5 m, 4 pcs.
  - ISO.12
  - Price: $12

- Hose insulation for DN 8 hoses, 1.5 m, 1 pc.
  - ISO.8
  - Price: $5

- Hose insulation for DN 12 hoses, 1.5 m, 1 pc.
  - ISO.12
  - Price: $5

- Temperature range
  - -20 – 60°C

- Color
  - Milky-transparent

- Price
  - $3

- Hose insulation for DN 8 hoses, 1.5 m, 2 pcs.
  - ISO.8
  - Price: $8

- Hose insulation for DN 12 hoses, 1.5 m, 2 pcs.
  - ISO.12
  - Price: $10

- Hose insulation for DN 8 hoses, 1.5 m, 4 pcs.
  - ISO.8
  - Price: $10

- Hose insulation for DN 12 hoses, 1.5 m, 4 pcs.
  - ISO.12
  - Price: $12

- Hose insulation for DN 8 hoses, 1.5 m, 1 pc.
  - ISO.8
  - Price: $5

- Hose insulation for DN 12 hoses, 1.5 m, 1 pc.
  - ISO.12
  - Price: $5

- Temperature range
  - -20 – 60°C

- Color
  - Milky-transparent

- Price
  - $3

- Hose insulation for DN 8 hoses, 1.5 m, 2 pcs.
  - ISO.8
  - Price: $8

- Hose insulation for DN 12 hoses, 1.5 m, 2 pcs.
  - ISO.12
  - Price: $10

- Hose insulation for DN 8 hoses, 1.5 m, 4 pcs.
  - ISO.8
  - Price: $10

- Hose insulation for DN 12 hoses, 1.5 m, 4 pcs.
  - ISO.12
  - Price: $12

- Hose insulation for DN 8 hoses, 1.5 m, 1 pc.
  - ISO.8
  - Price: $5

- Hose insulation for DN 12 hoses, 1.5 m, 1 pc.
  - ISO.12
  - Price: $5

- Temperature range
  - -20 – 60°C

- Color
  - Milky-transparent

- Price
  - $3

- Hose insulation for DN 8 hoses, 1.5 m, 2 pcs.
  - ISO.8
  - Price: $8

- Hose insulation for DN 12 hoses, 1.5 m, 2 pcs.
  - ISO.12
  - Price: $10

- Hose insulation for DN 8 hoses, 1.5 m, 4 pcs.
  - ISO.8
  - Price: $10

- Hose insulation for DN 12 hoses, 1.5 m, 4 pcs.
  - ISO.12
  - Price: $12

- Hose insulation for DN 8 hoses, 1.5 m, 1 pc.
  - ISO.8
  - Price: $5

- Hose insulation for DN 12 hoses, 1.5 m, 1 pc.
  - ISO.12
  - Price: $5

- Temperature range
  - -20 – 60°C

- Color
  - Milky-transparent

- Price
  - $3
### Temperature Control Instruments | Accessories

#### Cooling coils

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Ident No.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC1</td>
<td>Cooling coil for IC basic</td>
<td>0020005116</td>
<td>$105</td>
</tr>
<tr>
<td>CC2</td>
<td>Cooling coil for IC</td>
<td>0025001061</td>
<td>$995</td>
</tr>
</tbody>
</table>

#### Solenoid valves

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Ident No.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>MV 1</td>
<td>Solenoid valve for cooling water control, max. 100°C, max. 10 bar</td>
<td>0020002763</td>
<td>$440</td>
</tr>
<tr>
<td>CO V 1</td>
<td>Solenoid valve for external temperature control, max. 180°C, max. 1 bar</td>
<td>0020002499</td>
<td>$779</td>
</tr>
<tr>
<td></td>
<td>Manually operated ball valve</td>
<td>002004620</td>
<td>$131</td>
</tr>
</tbody>
</table>

#### Ball valve M16x1

- Manually operated ball valve
- With union nut on one side for mounting on M16 x 1 thread. Second connection M16 x 1

#### Level controllers

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Ident No.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanic fluid level control</td>
<td>Fluid level monitor for operating heating bath circuits or coolers on open baths, 2 fittings for DN 1/2 hose and lock nuts included</td>
<td>0020004618</td>
<td>$451</td>
</tr>
</tbody>
</table>

#### Hose barb fittings and adapters

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Packaging units</th>
<th>Ident No.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olive for DN 6 hoses</td>
<td>Barb fitting adapter for DN 6 hose</td>
<td>2</td>
<td>0020004677</td>
<td>$42</td>
</tr>
<tr>
<td>Olive for DN 8 hoses</td>
<td>Barb fitting adapter for DN 8 hose</td>
<td>2</td>
<td>0020004666</td>
<td>$42</td>
</tr>
<tr>
<td>Olive for DN 10 hoses</td>
<td>Barb fitting adapter for DN 10 hose</td>
<td>2</td>
<td>0020004688</td>
<td>$42</td>
</tr>
<tr>
<td>Olive for DN 12 hoses</td>
<td>Barb fitting adapter for DN 12 hose</td>
<td>2</td>
<td>0020004699</td>
<td>$42</td>
</tr>
<tr>
<td>Adapter NPT 1/4</td>
<td>Adapter M16x1 to NPT 1/4 (male)</td>
<td>2</td>
<td>0020004570</td>
<td>$119</td>
</tr>
<tr>
<td>Adapter NPT 1/2</td>
<td>Adapter M16x1 to NPT 1/2 (male)</td>
<td>2</td>
<td>0020004571</td>
<td>$164</td>
</tr>
<tr>
<td>Lock nut M16x1</td>
<td>Nut for mounting hose barb fitting adapters, stoppers, NPT adapters</td>
<td>2</td>
<td>0020004583</td>
<td>$42</td>
</tr>
<tr>
<td>Stopper</td>
<td>For sealing, in combination with a lock nut</td>
<td>2</td>
<td>0020004584</td>
<td>$42</td>
</tr>
<tr>
<td>Elbow tube 90°</td>
<td>90° tubes, adapter, e.g. for connecting hoses without creating kinks</td>
<td>1</td>
<td>0025001252</td>
<td>$83</td>
</tr>
</tbody>
</table>

#### Other accessories

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Ident No.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCS.ICC</td>
<td>Pump connection set for ICC</td>
<td>447900</td>
<td>$105</td>
</tr>
<tr>
<td>PT 100.30</td>
<td>Temperature measuring probe, stainless steel</td>
<td>4024700</td>
<td>$85</td>
</tr>
<tr>
<td>WH 10</td>
<td>WHT wall mount</td>
<td>0020000084</td>
<td>$32</td>
</tr>
<tr>
<td>PC 1.1</td>
<td>RS 232 cable, 3 m</td>
<td>2616700</td>
<td>$20</td>
</tr>
<tr>
<td>labworldsoft®</td>
<td>Laboratory software</td>
<td>4720000</td>
<td>$200</td>
</tr>
</tbody>
</table>

---

**CC1 Cooling coil for IC basic**

**CC2 Cooling coil for IC**

**CO V 1 Solenoid valve for external temperature control**

**Mechanic fluid level controller**

**PCS.ICC Pump connection set for ICC**

**Solenoid valves CMV 1 with M16x1 hose olives included**

**Stopper**

**Elbow tube 90°**

**Adapter NPT 3/4**

**Adapter NPT 1/4**

**PC 1.1**

**PT 100.30**

**WH 10**

**Flowmeter**

**Stopper**

**Labworldsoft®**

---

---

---

---

---

---
**Temperature Control Instruments | Packages**

**Included in ICC Package 1:**
1. ICC basic/control head
2. Bath bridge
3. Bath vessel

**Additionally included in ICC Package 2:**
4. Cover
5. Cooling coil
6. Pump connection set
7. PT 100 probe (control version only)

---

### ICC Package 1

<table>
<thead>
<tr>
<th>Description</th>
<th>Package</th>
<th>Bath Size</th>
<th>Bath Opening (WxD)*</th>
<th>Ident No.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICC basic eco 8</td>
<td>Basic</td>
<td>S 188 x 105</td>
<td>2010000853</td>
<td>$2,213</td>
<td></td>
</tr>
<tr>
<td>ICC control eco 8</td>
<td>Basic</td>
<td>S 188 x 105</td>
<td>2010000850</td>
<td>$2,442</td>
<td></td>
</tr>
<tr>
<td>ICC basic pro 9</td>
<td>Basic</td>
<td>M 255 x 127</td>
<td>2010000849</td>
<td>$2,686</td>
<td></td>
</tr>
<tr>
<td>ICC control pro 9</td>
<td>Basic</td>
<td>M 255 x 127</td>
<td>2010000847</td>
<td>$2,973</td>
<td></td>
</tr>
<tr>
<td>ICC basic eco 18</td>
<td>Basic</td>
<td>L 245 x 100</td>
<td>2010000851</td>
<td>$2,457</td>
<td></td>
</tr>
<tr>
<td>ICC control eco 18</td>
<td>Basic</td>
<td>L 245 x 100</td>
<td>2010000850</td>
<td>$2,692</td>
<td></td>
</tr>
</tbody>
</table>

---

### ICC Package 2

<table>
<thead>
<tr>
<th>Description</th>
<th>Package</th>
<th>Bath Size</th>
<th>Bath Opening (WxD)*</th>
<th>Ident No.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICC basic eco 8 c</td>
<td>Control</td>
<td>S 188 x 105</td>
<td>2010000854</td>
<td>$2,786</td>
<td></td>
</tr>
<tr>
<td>ICC control eco 8 c</td>
<td>Control</td>
<td>S 188 x 105</td>
<td>2010000851</td>
<td>$3,015</td>
<td></td>
</tr>
<tr>
<td>ICC basic pro 9 c</td>
<td>Control</td>
<td>M 255 x 127</td>
<td>2010000848</td>
<td>$3,209</td>
<td></td>
</tr>
<tr>
<td>ICC control pro 9 c</td>
<td>Control</td>
<td>M 255 x 127</td>
<td>2010000846</td>
<td>$3,457</td>
<td></td>
</tr>
<tr>
<td>ICC basic eco 18 c</td>
<td>Control</td>
<td>L 245 x 100</td>
<td>2010000852</td>
<td>$3,353</td>
<td></td>
</tr>
<tr>
<td>ICC control eco 18 c</td>
<td>Control</td>
<td>L 245 x 100</td>
<td>2010000851</td>
<td>$3,538</td>
<td></td>
</tr>
</tbody>
</table>

---

### IC Package

<table>
<thead>
<tr>
<th>Description</th>
<th>Package</th>
<th>Bath Size</th>
<th>Bath Opening (WxD)*</th>
<th>Ident No.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>K. basic pro 12 c</td>
<td>Control</td>
<td>M 255 x 105</td>
<td>2010000467</td>
<td>$3,551</td>
<td></td>
</tr>
<tr>
<td>K. control pro 12 c</td>
<td>Control</td>
<td>M 255 x 105</td>
<td>2010000465</td>
<td>$3,975</td>
<td></td>
</tr>
<tr>
<td>K. basic eco 18 c</td>
<td>Control</td>
<td>L 245 x 100</td>
<td>2010000468</td>
<td>$3,998</td>
<td></td>
</tr>
<tr>
<td>K. control eco 18 c</td>
<td>Control</td>
<td>L 245 x 100</td>
<td>2010000466</td>
<td>$4,322</td>
<td></td>
</tr>
<tr>
<td>K. basic pro 20 c</td>
<td>Control</td>
<td>L 255 x 109</td>
<td>2010000470</td>
<td>$4,604</td>
<td></td>
</tr>
<tr>
<td>K. control pro 20 c</td>
<td>Control</td>
<td>L 255 x 109</td>
<td>2010000468</td>
<td>$4,828</td>
<td></td>
</tr>
</tbody>
</table>

---

**Notes:**
- * Already included with control devices
- ** Already included in IC control device

---

**Eco baths (plastic) can be used at temperatures of up to 100 °C (H2O only). Pro baths (stainless steel) can be used at temperatures of up to 200 °C.**

---

**Immersion depth for all baths with ICC: 85 mm to 125 mm; IC: 95 mm to 135 mm**
Safety

- Monitoring of the difference between internal and external temperature (adjustable)
- Maximum pressure easy to adjust/select
- Wireless controller (WiCo) enables safe and remote control of the devices, e.g. if working in a fume hood

Intelligence

- Switch between internal and external temperature control at the press of a button
- Programming function
  10 individual programs, each with 10 steps that are triggered by time or target temperature. Additional features are available, e.g. options to integrate a solenoid valve within the program.

Performance

- Increased maximum temperature (HBC/IC)
- Greater accuracy
- Increased pump capacity (HBC/IC)
- Heat output can be reduced by up to 50% for longer heat-up times, to adapt the device to previous systems or to provide overload protection

Programs

Measuring graph

The main screen can display either the process parameters (standard) or a temperature/time graph. The user can switch between these options using a quick-access key.

Option to connect external solenoid valves via multi I/O port (HBC/IC control only)
- For the control of solenoid valves
- For automatic refilling
- For switching the cooling water circuit on/off
- For fluid level monitoring
- As an electronic stopcock
- Output for alarm signals
- Input for standby mode (for switching off the device)
IKA® Offers More

labworldsoft®

The IKA® laboratory software labworldsoft® is a modern software package satisfying all of your laboratory needs. The software allows you to use a PC to connect up to 64 devices in a network. All test parameters can be logged automatically, helping to simplify your documentation process in compliance with GLP, for example. Measurements and experiment procedures can be performed independently of each other. Long waiting and processing times are reduced, resulting in increased productivity.

Worldwide service network — direct contacts in your region

Our dedicated team of engineers provides comprehensive technical services worldwide. If you have any service questions, please do not hesitate to contact IKA® directly. Alternatively, you can get in touch with your dealer. IKA® guarantees that spare parts will be available for 10 years. In the event of any faults with a device, or if you have any technical questions regarding the devices, maintenance or replacement parts, please call us on +1 800 733-3037 or send us an email at service@ika.com

Calibration and adjustment

The internal (and external, if used) temperature sensor can be adjusted via either a two-point or three-point calibration process. On request, calibration can also be performed in the plant by the IKA® service team or by an external service provider. If you would like to request this service, please contact our service department by telephone on 00 8000 4524357 (00 8000 IKAHELP) or by email at service@ika.com.

Customizing Center

It is important that IKA® products perform in real laboratory applications. We are introducing a new program of product solutions that are customized to your individual needs.

If you cannot find the right device in our standard product range, please send us the details of the specification you need using the online form. Our team will check the feasibility of the specification and offer you a solution.

Please visit www.ika.com/customizingcenter to have a look at the product modification requests that we have already implemented.

IKA® application support

Our Application Center spans 400 m² and is equipped with the most modern facilities for presenting and testing laboratory equipment and processes. The Center brings us even closer to our customers and improves our service. Interested parties and customers can use our facilities to test processes that include stirring, shaking, dispersing, grinding, heating, analysis and distillation.

Please call us on +1 800 733-3037, send us an email at sales@ika.net or visit our website at www.ika.com/applicationsupport.
Safety OLED Display designed to work perfectly

IKA®-Works, Inc.
2635 Northchase Pkwy SE
Wilmington, NC 28405-7419
USA
Tel. +1 800-733-3037
Tel. +1 910 452-7059
Fax +1 910 452-7693
sales@ika.net
www.ika.com

Ordering made easy!
For more information on our products and online orders, please visit:
www.ika.com/thermostats

IKAwoldwide | #lookattheblue

IKA®-Works, Inc.
2635 Northchase Pkwy SE
Wilmington, NC 28405-7419
USA
Tel. +1 800-733-3037
Tel. +1 910 452-7059
Fax +1 910 452-7693
sales@ika.net
www.ika.com

designed
to work perfectly

Prices are valid until December 31, 2016
All prices exclude VAT
IKA® reserves the right to changing products, part numbers, and pricing, as well as availability of products.

201604_Temperature Control System_Brochure_IWW_EN_USD