# IKA

designed for scientists

## T25 easy clean control WiCo

Operating instructions          EN

(EN)

## Contents

## EU Declaration of conformity

We declare under our sole responsibility that this product corresponds to the directives 2014/35/EU, 2006/42/EC, 2014/30/EU and 2011/65/EU and conforms with the following standards or normative documents: EN 61010-1, EN 61326-1, EN 60529 and EN ISO 12100.

Bluetooth® module:
Directive: 2014/53/EU
Standards: EN 300328, EN 301489-1, EN 301489-17, EN 60950-1.

A copy of the complete EU Declaration of Conformity can be requested at sales@ika.com.

## Note for USA (FCC)

This equipment complies with Part 15 of the FCC rules. Any changes or modifications not expressly approved by the Manufacturer could void the user's authority to operate the equipment. This device complies with Part 15 of the FCC rules subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept all interference received, including interference that may cause undesired operation.

**NOTE:**
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## Note for Canada (IC)

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:
(1) This device may not cause interference
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

This device complies with Health Canada's Safety Code 6/IC RSS-210. The installer of this device should ensure that RF radiation is not emitted in excess of the Health Canada's requirement.
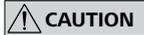
# Explication of warning symbols

| ⚠ DANGER | Indicates an (extremely) hazardous situation, which, if not avoided, will result in death, serious injury. |
|---|---|
| ⚠ WARNING | Indicates a hazardous situation, which, if not avoided, can result in death, serious injury. |
| ⚠ CAUTION | Indicates a potentially hazardous situation, which, if not avoided, can result in injury. |
| ⚠ NOTICE | Indicates practices which, if not avoided, can result in equipment damage. |

# Safety instructions

**General information:**
- **Read the operating instructions in full before starting up and follow the safety instructions.**
- Keep the operating instructions in a place where they can be accessed by everyone.
- Ensure that only trained staff work with the device.
- Follow the safety instructions, guidelines, occupational health and safety and accident prevention regulations.
- Observe the safety instructions of the drive unit!

**Battery pack RB 1:**

⚠ **NOTICE**    If during operation the battery pack RB 1 (rechargeable battery) becomes fully discharged, the device (drive unit) will continue to run or be shut down depending on the value settings for "Time Out" and "Safe Speed". If the device is set so that it continues to run when the battery pack of the **WiCo** is fully discharged, the only means of switching the drive unit off are the "On/Off" button, "mains switch" or the rotary/push knob!

⚠ **NOTICE**    **Please note the following safety instructions for the battery pack RB 1 (rechargeable battery):**

- Keep the battery pack out of reach of children at all times.
- Store the battery pack in a cool, dry place.
- Never throw the battery pack into a fire. Keep it away from direct sunlight and temperatures above 60 °C. High temperatures will damage the battery pack and render it unusable. Temperatures above 100 °C may cause it to explode.
- Never throw the battery pack into water or expose it to moisture. Water may lead to a short-circuit, causing the battery pack to explode.
- Do not deform or crush the battery pack or damage it in any other way. This can cause battery fluid to leak and/or the battery pack to explode.
- When not in use, keep battery packs away from paperclips, coins, keys, nails, screws or other small metal objects which could cause the contacts to be bridged. Short-circuiting may result in an explosion.
- Explosion of a battery pack may release battery fluid and cause a fire.
- The lithium polymer battery pack must only be used and charged in **IKA** products designed for use with this battery pack.
- When the battery pack is inserted it should slide in easily and without resistance. Do not force it.
- If the battery pack is removed for an extended period of time, store it in a sealed plastic bag to prevent short-circuiting due to moisture or contact with metal components.
- The operating temperature range of the battery pack is from 0 °C to + 45 °C. Note that the battery pack capacity will be reduced at temperatures below 20 °C.
- Only the rechargeable battery types recommended in the technical data may be used in the device!

   Do not charge battery pack that have leaked or that are discolored, deformed or damaged in any other way.

**Disposal instructions:**
- The device, packaging, accessories and batteries must be disposed of in accordance with national regulations.
- When disposing of the battery pack, please tape over the contacts with adhesive tape to prevent short-circuiting due to moisture or contact with metal components. Short-circuiting may result in an explosion.
- Do not throw used battery packs into your household waste. Dispose of them properly in accordance with statutory regulations.

End users are obliged by law to return all used disposable and rechargeable batteries. Throwing them into the household waste is prohibited. Disposable/rechargeable batteries containing harmful substances are marked with this symbol to indicate that they may not be disposed of as household waste.

# Intended use

**Use:**
The **WiCo** is a **Wi**reless **Co**ntroller (**WiCo**). With the **WiCo**, it is possible to work with the drive unit in a fume hood or safety cabinet without lifting the protective screen and helps protecting the user from toxic material exposure in addition to preserving sample integrity.

**Range of use:**
Indoor environments similar to that a laboratory of research, teaching, trade or industry.

**Wireless remote control:**
Before using the wireless link between the **WiCo** and the **IKA** drive unit, first check whether your region is included in the radio communication approval for the device. If it is not, remote control can also be performed using a USB cable.

The safety of the user cannot be guaranteed:
- If the device is operated with accessories that are not supplied or recommended by the **IKA**.
- If the device is operated improperly or in contrary to the **IKA** specifications.
- If the device or the printed circuit board are modified by third parties.

# Unpacking

**Unpacking:**
- Please unpack the device carefully;
- In the case of any damage a fact report must be sent immediately (post, rail or forwarder).

**Delivery scope:**
- **WiCo**
- **WiCo** holder **WH 11**
- USB 2.0 cable (micro A – micro B)
- USB 2.0 cable (A – micro B)
- **OS 1.0** plug-in power supply ❶
- User guide
- Warranty card.

❶ **OS 1.0** plug-in power supply:



| Adapter: | Adapter: | Adapter: | Adapter: |
|---|---|---|---|
| Europe | USA | UK | Australia |
| Switzerland | China | | |

## Useful information

The **IKA** drive unit is controlled via a **WiCo**. If the **WiCo** is connected to the drive unit via a USB (Universal Serial Bus) cable, the ⟷ symbol appears. If the **WiCo** is not connected to the drive unit via a USB cable, the data exchange between the drive unit and **WiCo** is performed via Bluetooth®. In this case the Bluetooth® symbol 📶 is displayed.

Depending on the structure of the building, the **WiCo** can be operated at a distance of up to 10 m from the drive unit, using the Bluetooth® connection. The **WiCo** can be installed in a safe place easily accessible by the user while the drive unit is running.
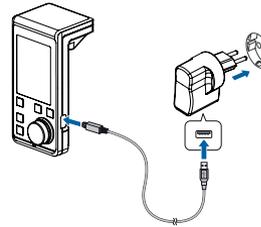
## Charging the battery pack RB 1

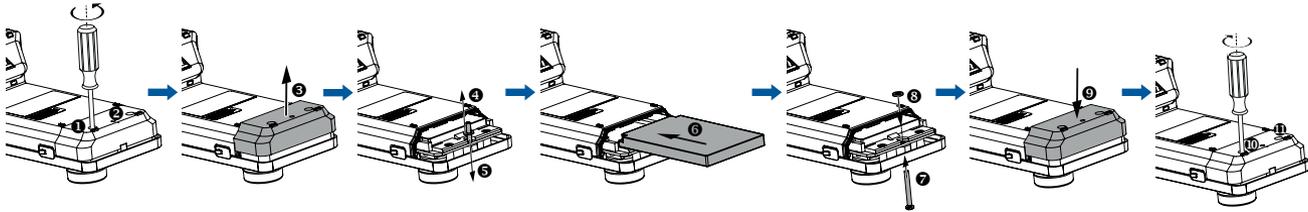The battery pack in the **WiCo** can be charged by any of the following means:

Via a USB cable at the drive unit or a PC:
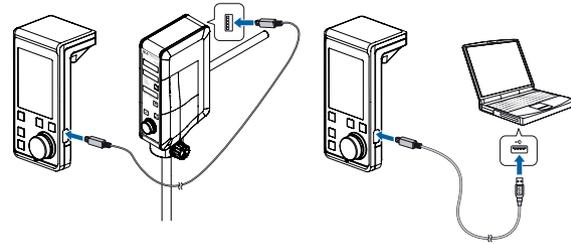


Via an OS 1.0 plug-in power supply:

## Replacing the battery pack RB 1 in the WiCo



## Commissioning

**Note:** Before the first time to use the **IKA** drive unit and the **WiCo**, please charge the battery pack in the **WiCo**.

Pairing the **WiCo** with the drive unit:
1) Connect **WiCo** with the drive unit via USB cable.
2) Switch on drive unit and **WiCo**.
3) Follow the instructions on the **WiCo** screen.
4) Devices will be coupled automatically after several seconds.
5) Remove the USB cable after successful coupling for wireless control.

Switching on the device:
After the drive unit and the **WiCo** has been switched on, the **WiCo** will connect the drive unit automatically. The device name and software version appear on the display of the **WiCo**.
After several seconds a signal sounds, the last setting is displayed (Operating mode B - if available). Once the working screen is displayed, the drive unit is ready for operation.
Make sure that the speed selected is appropriate for the trial run. If in doubt, use the rotary/push knob on the **WiCo** to select the slowest speed.
To start or stop the drive unit function, press the rotary/push knob on the **WiCo**.

**Note:** To prevent an inadvertent starting of the drive unit by pressing the rotary/push knob (F) on the **WiCo**, the display show: "Do you really want to start?". Start the drive unit only by pressing the rotary/push knob (F) again.

In emergency the drive unit can be stopped by pressing the rotary knob or on/off button ( ⏻ ) on the drive uint.

The control elements of the **WiCo** can be disabled by pressing the lock button ( ⊶ ) for a longer time, so that no inadvertent changes are made while the device is running (the lock symbol ⊶ appears in the display).
Pressing the button ( ⊶ ) for a longer time again enables the control elements (lock symbol ⊶ disappears from the display).

If the drive unit is started (speed) before connecting with the **WiCo**, the buttons and rotary knob on the **WiCo** will be disabled.

**Please also observe the operating instructions of the IKA drive unit!**

# Working with the WiCo

## Control elements of the WiCo:
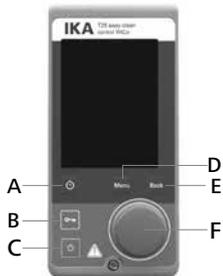


## Item   Name

| Item | Name | |
|---|---|---|
| **A** | **Timer button:** | Enter the timer menu. |
| **B** | **Lock button:** | Disable button and rotary / push knob |
| **C** | **On/Off button:** | Switch the **WiCo** on and off |
| **D** | **Menu button:** | Press it once: main menu is displayed |
| | | Press it a second time: back to the working screen |
| **E** | **Back button:** | Return to the previous menu level |
| **F** | **Rotary/push knob:** | Navigation, selecting and changing the settings in the menu |

## Explanation of symbols on the working screen:



The symbols displayed change depending on the status and settings of the **WiCo**. The screen below shows the most significant symbols on the working screen.

🔊 : **Bluetooth®:**
This symbol means the drive unit and the **WiCo** are communicating via Bluetooth®.
The symbol no longer appears if no Bluetooth® communication is being performed.

🔒 : **Lock:**
This symbol means that the function of the buttons and the rotary knob for controlling the **WiCo** are disabled.
The symbol no longer appears if the functions are enabled once again by pressing the lock button a second time.

**B: Operating mode:**
This symbol indicates the operating mode currently selected (A, B, C).

⟷ : **USB:**
This symbol means the drive unit is communicating via a USB cable. The symbol no longer appears if no USB cable is being used for communicating with the drive unit.

🔋 : **Battery pack (rechargeable battery):**
This symbol indicates the charging status of the battery pack RB 1 within the **WiCo**.
The charging symbol appears if the **WiCo**:
- is connected to a PC via a USB cable
- is connected to a drive unit via a USB cable
- is connected to the power supply unit **OS 1.0** via a USB cable.

## Tool [hh:mm:ss]: Tool maintenance time
This value indicates the remaining time to maintenance of dispersing tool **S 25 EC-T...**.
If another dispersing tool is used, the display show "---".

## Temp.: ✎ Temperature sensor
This symbol appears when the temperature display is activated in the display.
If a dispersing tool other than the **S 25 EC-T...** is used, the following value show "---".

**LIMIT**: **Speed limit:**
This symbol indicates upper/low speed limit set for the drive unit.

**PC** : **PC control:**
This symbol means that either the drive unit or the **WiCo** is connected to a computer and the drive unit is being controlled from the computer. Then, the buttons and rotary/push knob is no longer available except power switch is pressed.

**PR**  **Program Control:**

This symbol indicates that the **WiCo** is controlled by a program (see "PROGRAMS").

**Continuous mode:**
This symbol indicates that the drive unit is in continuous mode and indicates the direction of rotation of the drive unit.

**Intermittent mode:**
This symbol indicates that the drive unit is in intermittent mode.

## Navigation menu and menu structure:

Navigation menu:
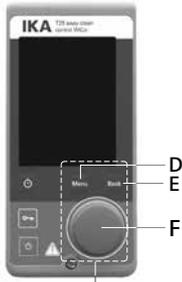


Navigation controls
in the menu

☞ Press the "Menu" button (D).
☞ Select the menu by turning the rotary/push knob (F) to the right or left to select the desired menu or sub-menu, which can then be selected by pressing the rotary/push knob.
☞ Press or turn the rotary/push knob (F) again to select the desired menu option and edit the values or settings, or activate/deactivate a function.
☞ Turn the rotary/push knob (F) to "OK" and confirm the input by pressing the rotary/push knob (F). Press the "Back" button (E) to return to the previous menu, or press "Menu" button (D) to exit and return to working screen.

**Note:** The menu option activated is highlighted yellow in the display.

**Navigation menu:** → Press the "Menu" button (D) and turn the rotary/push knob (F).
← Press the "Back" button (E) or the "Menu" button (D).
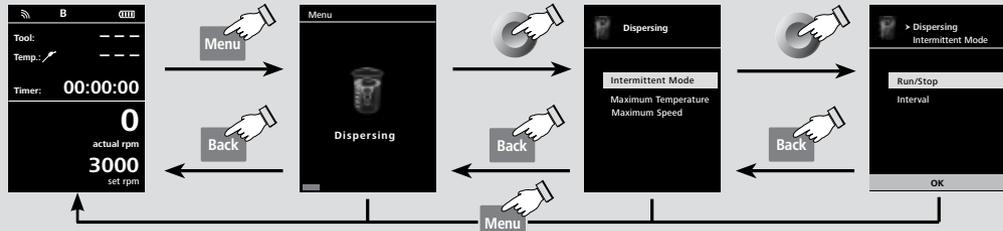


*Note:* If you press the "Menu" button (D), the system skips directly back to the working screen.
If you press the "Back" button (E), the system skips back to the previous display.

Menu structure:

| | | | | | Factory settings |
|---|---|---|---|---|---|
| Dispersing | Intermittent Mode | Run/Stop | | | - |
| | | Interval | Run Time | | 00:15 [mm:ss] |
| | | | Stop Time | | 00:15 [mm:ss] |
| | Maximum Temperature | | | | depending on drive unit |
| | Maximum Speed | | | | 25000 rpm |
| Tools | Tool maintenance time | | | | 20:00:00 [hh:mm:ss] for **S 25 EC-T...** only |
| | Reset maintenance time | | | | - |
| | Set maintenance time | | | | 40:00:00 [hh:mm:ss] |
| Timer | Set Time | | | | 00:00:00 [hh:mm:ss] |
| | Timer Enabled | | | | - |
| Operating Mode | A | | | | - |
| | B | | | | activated |
| | C | | | | - |
| Display | Tools | | | | activated |
| | Temperature | | | | activated |
| | Timer | | | | activated |
| | Max. temperature | | | | - |
| Programs | Program 1 | | | | - |
| | Program 2 | | | | - |
| | ... | | | | - |
| Safety | Time Out | | | | 00:30 [mm:ss] |
| | Safe Speed | | | | 0 rpm |
| | Password | | | | 000 |

Menu

| | | | |
|---|---|---|---|
| Settings | Languages | English | activated |
| | | Deutsch | - |
| | | … | - |
| | Display | Background | |
| | | Black | activated |
| | | White | - |
| | | Brightness | |
| | | Standard Mode | 60 % |
| | | Battery Mode | 20 % |
| | | Firmware Update Info | activated |
| | Sound | Volume | 50 % |
| | | Key Tone | - |
| | Factory Settings | | |
| | Communication | Device Name | **T25 easy clean** |
| | | Bluetooth | activated |
| | Information | Dispersing | |
| | | Intermittent Mode | No |
| | | Interval Run | 0:15 |
| | | Interval Stop | 0:15 |
| | | Max Speed | 25000 |
| | | Max Temp. | depending on drive unit |
| | | Safety | |
| | | Time Out | 00:30 |
| | | Safe Speed | 0 |
| | | Software | |
| | | Version | yes |
| | | Station Version | yes |
| | | Operating Mode | B |
| | | Firmware Update Info | - |

Menu (details):

 **Dispersing:**

Intermittent Mode:

| Symbol rotation direction | Rotor rotation direction | Graph | |
|---|---|---|---|
|  |  |  | Factory setting: continuous mode |
|  |  |  | **Function "Run/Stop" is activated:**<br>The run time and stop time can be set separately. |

Maximum Temperature:
In the "Maximum Temperature" menu option, the user is allowed to specify a temperature from 0 to 125 °C for the dispersing media. When the dispersing media reach the set value, the device stop running.

Maximum Speed:
In "Maximum Speed" menu option, the user is allowed to set the maximum speed from 3000 to 25000 rpm.

**Tools:**

Tool maintenance time:
In the "Tool maintenance time" menu option, the user can check the tool maintenance time.

Reset maintenance time:
In the "Reset maintenance time" menu option, the user can reset the tool maintenance time.

Set maintenance time:
In the "Set maintenance time" menu option, the user can set the tool maintenance time from 4 to 40 hours.

**Timer:**

Set Time:
In the "Set Time" menu option, the user can set time from 0 to 99:59:59 [hh:mm:ss] for the dispersing procedure.

Timer Enabled:
In the "Time Enabled" menu option, the user can activate the timer function.

**Note:** The user can stop the dispersing function before expiry o the set time. In this case, the countdown of the timer is interrupted.

**Operating Mode:**

Operating Mode A:
In this operating mode, the set speed is not saved when the current run comes to an end or the device is switched off.

Operating Mode B:
In this operating mode, the set speed is saved when the current run comes to an end or the device is switched off, and the value can be changed.

Operating mode C:
In this operating mode, the set speed is saved when the current run comes to an end or the device is switched off, and the value cannot be changed.

**Display:**
In the "Display" menu the user can specify what information will be displayed on the main screen.

**Programs:**
Under menu option "Programs", 5 user-defined speed (rpm)-time profiles can be created. In addition, the user could define the intermittent mode is activated or not in the programs.
If the intermittent mode is activated, the run time/stop time value from "Intermittent Mode" setting will be taken.

**Note:** If user need to activate the intermittent mode in one segment of a program, he should set the "Run time/Stop time" in menu option "Interval", meanwhile activate the "Run/Stop" function in menu option "Intermittent Mode" (see section "Dispersing").
Once a programs has been selected, the following options are available.

**Start:** Start the selected program upon request.
When the selected program is started by pressing on menu option "Start" with rotary/push knob, screen reminds the user to confirm the program control. Then you have to set the loop count. Press "OK" with rotary/push knob to start the program control.

**Edit:** Edit the selected program parameters.

Start to edit the selected program parameters by pressing on menu option "Edit" with rotary/push knob. The user can edit, delete or insert one selected program segment in the program.

When user edits the program time for at least one segment, symbol ( ✐ ) for respective program will appear.

**Delete:** Deletes the selected program.

If a selected program is deleted by pressing on menu option "Delete" with rotary/push knob, all the program parameters will be emptied. The symbol ( ✐ ) disappears.

**Details for editing the program:**

When a program is being edited, following screen appears.

| PROGRAM 1 | | | |
|---|---|---|---|
| Seg No. | rpm | Time mm:ss | Interm. Mode |
| 1 | 0 | 00:00 | No |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| Edit | Delete | Insert | |

In this program, user can define up to 5 segments. The selected segment is highlighted. Then, the user can edit, delete or insert a segment in this program.

When the "Back" button is pressed after editing, the program is save automatically.

Edit:

When the highlighted "edit" symbol appear on the right top of the screen, the user could change the speed (rpm), time value or intermittent mode setting.

**Note:** The speed (rpm) value can be changed during the speed limit range of the device. The time can be set from 1 second to 100 minutes.

Delete:

When delete a highlighted segment, the settings will be emptied. The section jump to next segment.

Insert:

With the insert option, a new segment will be insert above the selected segment. The default settings for the new segment are as following:

rpm: 3000

Time (mm:ss): 00:01

Intermittent Mode: No

After a program is being edited, press the "Back" button to save the settings. Press the "Back" button again, the screen back to working screen.
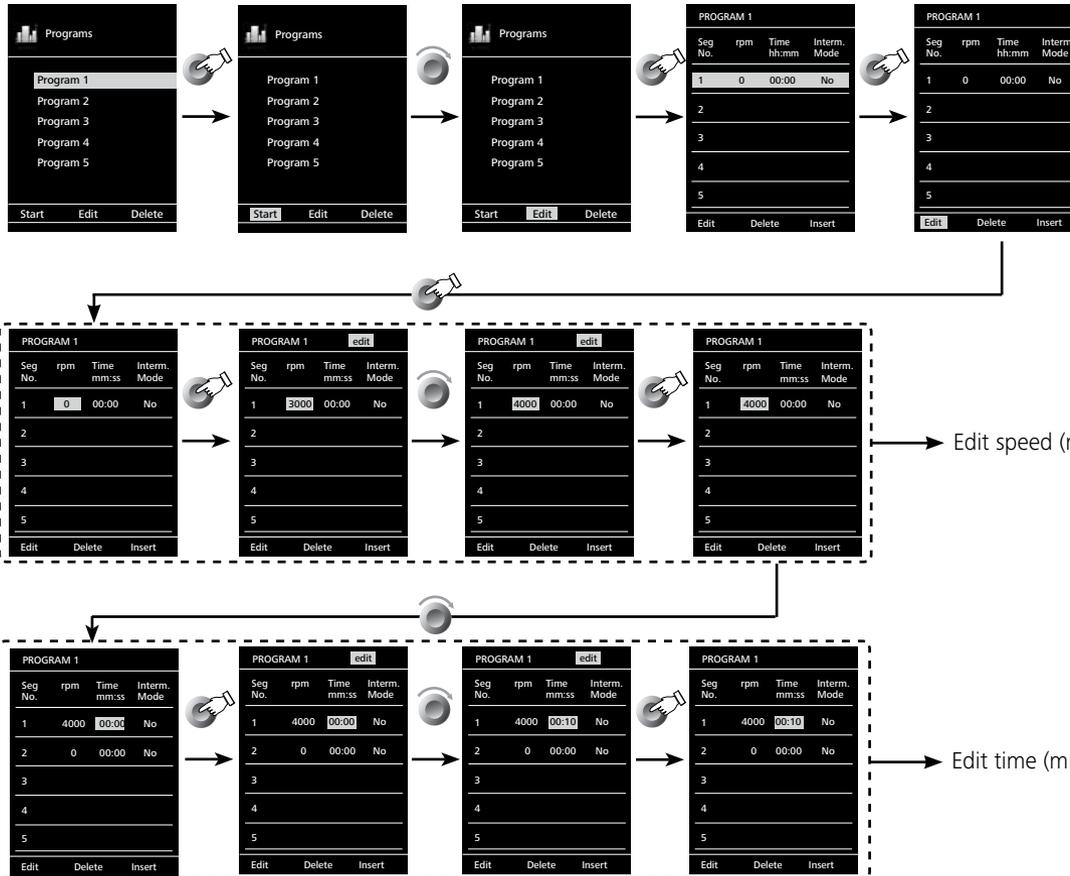
## Example for editing the program:

Programs
- Program 1
- Program 2
- Program 3
- Program 4
- Program 5

Start  Edit  Delete

Programs
- Program 1
- Program 2
- Program 3
- Program 4
- Program 5

Start  Edit  Delete

Programs
- Program 1
- Program 2
- Program 3
- Program 4
- Program 5

Start  Edit  Delete

| PROGRAM 1 | | | |
|---|---|---|---|
| Seg No. | rpm | Time hh:mm | Interm. Mode |
| 1 | 0 | 00:00 | No |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |

Edit  Delete  Insert

| PROGRAM 1 | | | |
|---|---|---|---|
| Seg No. | rpm | Time hh:mm | Interm. Mode |
| 1 | 0 | 00:00 | No |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |

Edit  Delete  Insert

| PROGRAM 1 | | | |
|---|---|---|---|
| Seg No. | rpm | Time mm:ss | Interm. Mode |
| 1 | 0 | 00:00 | No |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |

Edit  Delete  Insert

| PROGRAM 1 | edit | | |
|---|---|---|---|
| Seg No. | rpm | Time mm:ss | Interm. Mode |
| 1 | 3000 | 00:00 | No |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |

Edit  Delete  Insert

| PROGRAM 1 | edit | | |
|---|---|---|---|
| Seg No. | rpm | Time mm:ss | Interm. Mode |
| 1 | 4000 | 00:00 | No |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |

Edit  Delete  Insert

| PROGRAM 1 | | | |
|---|---|---|---|
| Seg No. | rpm | Time mm:ss | Interm. Mode |
| 1 | 4000 | 00:00 | No |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |

Edit  Delete  Insert

→ Edit speed (rpm)

| PROGRAM 1 | | | |
|---|---|---|---|
| Seg No. | rpm | Time mm:ss | Interm. Mode |
| 1 | 4000 | 00:00 | No |
| 2 | 0 | 00:00 | No |
| 3 | | | |
| 4 | | | |
| 5 | | | |

Edit  Delete  Insert

| PROGRAM 1 | edit | | |
|---|---|---|---|
| Seg No. | rpm | Time mm:ss | Interm. Mode |
| 1 | 4000 | 00:00 | No |
| 2 | 0 | 00:00 | No |
| 3 | | | |
| 4 | | | |
| 5 | | | |

Edit  Delete  Insert

| PROGRAM 1 | edit | | |
|---|---|---|---|
| Seg No. | rpm | Time mm:ss | Interm. Mode |
| 1 | 4000 | 00:10 | No |
| 2 | 0 | 00:00 | No |
| 3 | | | |
| 4 | | | |
| 5 | | | |

Edit  Delete  Insert

| PROGRAM 1 | | | |
|---|---|---|---|
| Seg No. | rpm | Time mm:ss | Interm. Mode |
| 1 | 4000 | 00:10 | No |
| 2 | 0 | 00:00 | No |
| 3 | | | |
| 4 | | | |
| 5 | | | |

Edit  Delete  Insert

→ Edit time (mm:ss)

## First row (dashed box)

**Screen 1 — PROGRAM 1**

| Seg No. | rpm | Time mm:ss | Interm. Mode |
|---|---|---|---|
| 1 | 4000 | 00:10 | No |
| 2 | 0 | 00:00 | No |
| 3 | | | |
| 4 | | | |
| 5 | | | |

Edit    Delete    Insert

**Screen 2 — PROGRAM 1    edit**

| Seg No. | rpm | Time mm:ss | Interm. Mode |
|---|---|---|---|
| 1 | 4000 | 00:10 | No |
| 2 | 0 | 00:00 | No |
| 3 | | | |
| 4 | | | |
| 5 | | | |

Edit    Delete    Insert

**Screen 3 — PROGRAM 1    edit**

| Seg No. | rpm | Time mm:ss | Interm. Mode |
|---|---|---|---|
| 1 | 4000 | 00:10 | Yes |
| 2 | 0 | 00:00 | No |
| 3 | | | |
| 4 | | | |
| 5 | | | |

Edit    Delete    Insert

**Screen 4 — PROGRAM 1**

| Seg No. | rpm | Time mm:ss | Interm. Mode |
|---|---|---|---|
| 1 | 3000 | 00:10 | Yes |
| 2 | 0 | 00:00 | No |
| 3 | | | |
| 4 | | | |
| 5 | | | |

Edit    Delete    Insert

→ Edit intermittent mode (Yes/No)

Back

## Second row

**Screen 5 — PROGRAM 1**

| Seg No. | rpm | Time mm:ss | Interm. Mode |
|---|---|---|---|
| 1 | 4000 | 00:10 | Yes |
| 2 | 0 | 00:00 | No |
| 3 | | | |
| 4 | | | |
| 5 | | | |

Edit    Delete    Insert

**Screen 6 — PROGRAM 1**

| Seg No. | rpm | Time mm:ss | Interm. Mode |
|---|---|---|---|
| 1 | 4000 | 00:10 | Yes |
| 2 | 0 | 00:00 | No |
| 3 | | | |
| 4 | | | |
| 5 | | | |

Edit    Delete    Insert

**Screen 7 — PROGRAM 1**

| Seg No. | rpm | Time mm:ss | Interm. Mode |
|---|---|---|---|
| 1 | 4000 | 00:10 | Yes |
| 2 | 0 | 00:10 | No |
| 3 | | | |
| 4 | | | |
| 5 | | | |

Edit    Delete    Insert

…

### Safety:

Time Out:
In the "Time Out" menu, the user can set a time limit. This time limit applies if there is a communication failure between the drive unit and the **WiCo** or the communication range is exceeded.
The drive unit will continue to run at the set speed until the set time has expired. After that the drive unit will continue to run at the set safe speed (see the "Safe speed" menu).

**Note:** The initial setting for the time limit is 30 seconds. The user can set a value of up to 3 minutes for this time limit.

Safe Speed:
In the "Safe Speed" menu, the user can specify a speed that is appropriate and safe for the dispersing task. The safe speed applies if there is a communication failure between the drive unit and the **WiCo** or the communication range is exceeded.

**Note:** The default safety speed is 0 rpm and can be set alternatively between 1000 and 3000 rpm in 100 rpm increments, and is implemented after expiry of the time limit (see "Time out").

Password:
In the "Password" menu, the user can protect the **WiCo** settings using a password (factory setting: 000).
If you forgot your password, please contact our service department.

### Settings:

Languages:
The "Languages" option allows the user to select the desired language by turning and pressing the rotary/push knob. A tick indicates the language that is set for the system.

Display:
The "Display" option allows the user to change the background color and brightness of the working screen.
The user can also select to activate or inactivate the "Firmware Update Info" screen at the starting of the **WiCo**. A tick ($\sqrt{}$) shows that the option is activated.

Sound:
The "Sound" option allows the user to activate/deactivate the key-press sound and to set the volume.

Factory Settings:
Select the "Factory Settings" option by turning and pressing the rotary/push knob. The system requests confirmation to recreate the factory settings. Pressing the "OK" button resets all the system settings to the original standard values set at dispatch from the factory (see "Menu structure").

Communication:
The "Device name" menu option allows the user to edit the device name. This can relatively identify the paired drive unit.
The "Bluetooth®" option allows the user to activate/deactivate the "Bluetooth®" function. A tick ($\sqrt{}$) shows that the option is activated.
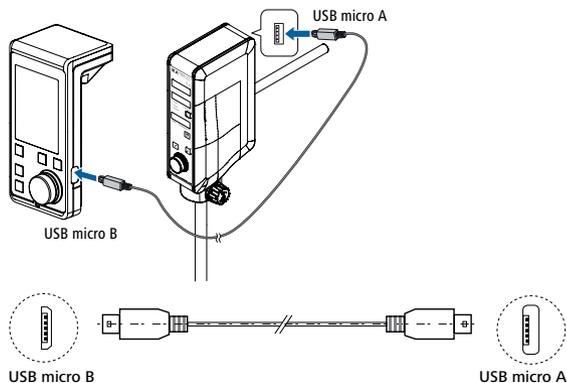
Information:
The "Information" option offers the user an overview of the most important system settings of the drive unit.
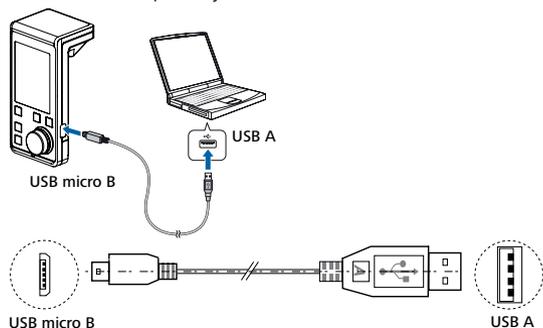
## Interface and output

See the operating instructions of the drive unit!

Connection capability: **WiCo** to the drive unit.

USB micro A

USB micro B

USB micro B

USB micro A

Connection capability: **WiCo** to a PC.

USB micro B

USB A

USB micro B

USB A

## Maintenance and cleaning

The instrument is maintenance-free. It is only subject to the natural wear and tear of components and their statistical failure rate.

**Cleaning:**

For cleaning disconnect the plug-in power supply!

Use only cleaning agents which have been approved by **IKA** to clean **IKA** instruments: water containing surfactant / isopropyl alcohol.

- Wear protective gloves during cleaning the instruments.
- Electrical instruments may not be placed in the cleansing agent for the purpose of cleaning.
- Do not allow moisture to get into the instrument when cleaning.
- Before using another than the recommended method for cleaning or decontamination, the user must ascertain with IKA that this method does not destroy the instrument.

**Spare parts order:**
When ordering spare parts, please give:
- machine type
- manufacturing number, see type plate
- item and designation of the spare part see **www.ika.com**, spare parts diagram and spare parts list
- Software version.

**Repair:**
**Please send in instrument for repair only after it has been cleaned and is free from any materials which may constitute a health hazard.**
For repair, please request the "**Decontamination Certificate**" form **IKA** or use the download printout of it from **IKA** website: **www.ika.com**.
If you require servicing, return the instrument in its original packaging. Storage packaging is not sufficient. Please also use suitable transport packaging.

## Error codes

See the operating instructions of **IKA** drive unit!

## Warranty

In accordance with **IKA** warranty conditions, the warranty period is 24 months. For claims under the warranty please contact your local dealer. You may also send the machine direct to our factory, enclosing the delivery invoice and giving reasons for the claim. You will be liable for freight costs. The warranty does not cover worn out parts, nor does it apply to faults resulting from improper use, insufficient care or maintenance not carried out in accordance with the instructions in this operating manual.

## Technical data

| WiCo | | |
|---|---|---|
| Permitted on time | **%** | 100 |
| Max. communication distance (dependent on the building) | **m** | 10 |
| Dimensions (W x D x H) | **mm** | 71 x 74 x 151 |
| Weight | **kg** | 0.28 |
| Ambient temperature | **°C** | + 5 ... + 40 |
| Ambient humidity (relative) | **%** | 80 |
| IP code according to EN 60529 | | IP 40 |
| Operation at a terrestrial altitude | **m** | max. 2000 |
| Interface | | USB |
| **Battery pack RB 1** | | |
| Voltage | **VDC** | 3.7 |
| Charging capacity | **mAh** | 2000 |
| Charging time | **h** | 4.5 |
| Working time | **h** | 15 |
| Battery type | | Lithium-polymer |
| **Power supply** | | |
| Input | **VAC** | 100...240 |
| Output | | 5 VDC 500 mA LPS |

*Subject to technical changes!*

# IKA

## designed for scientists

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Technical specifications may be changed without prior notice.