

Operating Instructions



DUFTDOS-AK1 and AK2 dosing device Aromatisation of dry rooms



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These operating instructions are an English translation of the original German version by the company WDT.

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1 About these instructions / general

1.1 Scope of applicability

This instruction describes the functioning, installation, commissioning and operation of the DUFTDOS-AK dosing device along with the corresponding accessories.

Depending on the device type (AK1 – AK2) and optional device equipment, the operation and installation of the device may differ.

The Operating Instructions must be read carefully prior to use or any maintenance work, and must be kept in close proximity to the device!

1.2 Target group

Only our authorised partners and people who have been trained in the functioning of the device are permitted to work at the device, provided that they have read and understood these operating instructions. Electrical connection work may only be carried out by appropriately trained specialists!

1.3 Symbols used

This document uses the following types of safety notices as well as general notices:



DANGER!

“DANGER” denotes a safety notice which, if disregarded, may lead to death or serious personal injury!



CAUTION!

“CAUTION” denotes a safety notice which, if disregarded, may lead to minor or moderate personal injury!



ESD SENSITIVE!

“ESD SENSITIVE” denotes electronic components that may be damaged by electrostatic discharges. The generally accepted safety precautions for ESD-sensitive devices must be observed when handling the devices!



ATTENTION!

“ATTENTION” denotes a safety notice which, if disregarded, may lead to material damage or malfunctions!



Tip!

A tip denotes information that may result in improvements in the operating process.



Disposal of waste electrical equipment

This symbol indicates that this product must not be disposed of with other household waste in accordance with the Waste Electrical and Electronic Equipment Directive (2012/19 EU) and national laws.

This product must be returned to a designated collection point. This can be done, for example, by dropping it off at an authorised collection point for the recycling of waste electrical and electronic equipment, or, for devices in Germany, also by returning it to the manufacturer, WDT GmbH & Co KG.

1.4 Warranty

All devices and systems of the Co. WDT are manufactured using state-of-the-art manufacturing methods and are subject to a comprehensive quality control. However, should there be a reason for complaint, any compensation claims shall be directed to the company WDT in accordance with the general terms and conditions of warranty (see below).

General terms and conditions of warranty

The company WDT assumes a 2-year warranty, starting with the commissioning, up to 27 months after delivery; subject to correct installation and commissioning with a completed and signed commissioning protocol.

Exempt from this are wear parts such as seals, hoses, diaphragms, dosing screws, electrodes, roller carriers and other parts that are subject to mechanical or chemical wear and tear. For these we assume a warranty of 1/2 year.

Our merchandise management programme requires an invoice for each delivery (including warranty services). When returning a defective component, upon review you will receive a corresponding credit, if applicable. We request a return within 14 days.

The costs for subsequent damage and for the processing of warranty claims are excluded.

There are no warranty claims for damage caused by frost, water and electrical overvoltage or by improper handling.



Tip!

For the safeguarding of any warranty claims, please send the completed commissioning protocol, together with the defective component, to WDT. Without the commissioning protocol, we reserve the right to assert a warranty regulation.



ATTENTION!

It is not permitted to make any modifications to the device. If this specification is not observed, the warranty obligation and product liability will expire!

1.5 Further information

Further information about special topics, e.g., description of the operating parameters, as well as additional support is available from your specialist dealer.

2 Safety

2.1 Intended use

The DUFTDOS-AK dosing device may only be used for the purpose listed in the product description in Chapter 3.2! Also pay attention to the locally applicable regulations concerning accident prevention, occupational safety and drinking water protection!

2.2 Safety notices



Carefully read and comply with the operating instructions prior to installation and use of the device! Work on the device and changes in the settings described here may only be carried out by properly trained and instructed personnel from a specialist company. Alternatively, the work can be carried out by persons who have read and understood the entire Operating Instructions.

It is of particular importance to comply with the rules for occupational safety and accident prevention and to wear protective clothing.

Pay attention to the warning notices on the device



2.2.1 Handling of chemicals, risks to humans and the environment

Important information concerning the handling of chemicals and fragrance concentrate can be found in the safety data sheet for the fragrance concentrate!

In the event of an emergency when handling chemicals, you can contact the Emergency Poison Centre!

Emergency number:

Munich Emergency Poison Centre (or any other Poison Centre)

Phone: +49 89 19240

2.2.2 Protective measures and rules of conduct

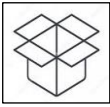


ATTENTION!

It is not permitted to make any modifications to the device. If this specification is not observed, the warranty obligation and product liability will expire!

Pay attention to the locally applicable regulations!

3 Product description - scope of delivery



3.1 Scope of delivery / accessories

DUFTDOS-AK1	DUFTDOS-AK2
Micro-processor controller NT35-R	Micro-processor controller NT35-R
1 small compressor 7006 AC	2 small compressors 7006 AC
1 bottle holder	2 bottle holders
1 fragrance container clear 250 ml	2 fragrance containers clear 250 ml
1 filter star 60 x 8 for increasing the surface area	2 filter stars 60 x 8 for increasing the surface area
Housing with all integrated components	Housing with all integrated components
1 inlet nozzle and 5 m dosing line PE 6 x 1	2 inlet nozzles and 5 m dosing line PE 6 x 1 each

The following optional accessories are available

- Inlet nozzle with heater (for type AK1)
- Fragrance concentrate
- Filter star
- Fragrance bottle
- Recall button

On-site services

- Isolated ground socket 230 VAC

3.2 Product description

The DUFTDOS-AK is used for the aromatisation of tepidaria, caldaria, infra-red cabins, ice cabins, etc., with power control. The DUFTDOS-AK is suitable for cabins with a temperature of up to 50°C and a volume of 50 m³. The volume depends on the air exchange rate. High air exchange rates reduce the effect; moreover, the aroma development strongly depends on the quality of the fragrance concentrate. The DUFTDOS-AK control unit is operated via a five-line display with three sensor keys.

A small compressor blows air across the surface of a container filled with fragrance concentrate. The fragrance concentrate evaporates and is carried into the cabin along with the air via a 6x1 mm hose line and an inlet nozzle. The fragrance intensity is set via the software with dosing and pause time.

Depending on the **device type (AK1 – AK2)** and optional device equipment, the operation and installation of the device may differ.

Optionally, the DUFTDOS-AK can be controlled with a push button from the cabin or from an external location via a potential-free contact.

For use in **ice cabins**, the DUFTDOS-AK1 is equipped **with a heater for the inlet nozzle** to keep the inlet nozzle free of ice.

Heating modes of the cabin:

When heating with a **surface heating system**, the **surface temperature should not exceed 60°C**

When heating with a **sauna heater**, the **room temperature should not exceed 50°C**.

Overview DUFTDOS-AK1 and AK2



Figure 1, DUFTDOS-AK1

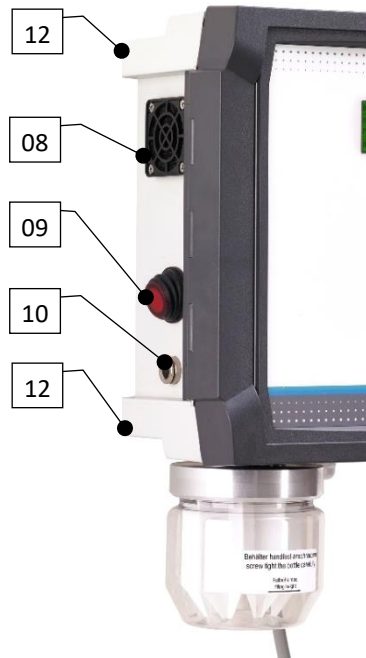


Figure 2, DUFTDOS-AK1 and AK2

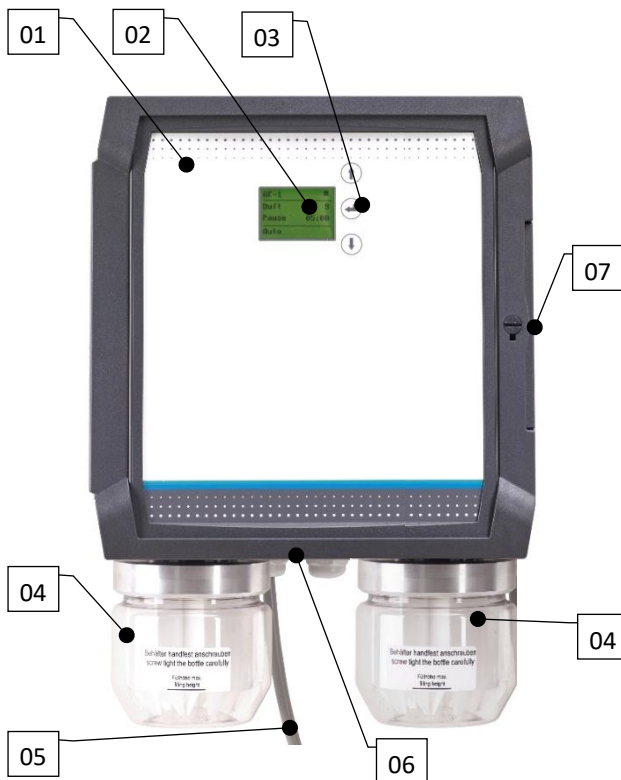


Figure 3, DUFTDOS-AK2

Key

- 01. Control housing with built-in small compressor, type AK2 has 2 compressors built in
- 02. Display
- 03. 3 buttons for operating the display
- 04. Fragrance container with filter star
- 05. Power cable with safety plug
- 06. Socket for button plate (option)
- 07. Opening mechanism control housing
- 08. Ventilation grille
- 09. Mains switch
- 10. Connection for fragrance hose (AK1 left side, AK2 left and right side)
- 11. Connection for the inlet nozzle heater (option)
- 12. Wall brackets (4 pc) – not shown

3.2.1 Control unit

The control unit consists of a housing with a lateral orifice as air supply for the built-in compressor. The compressor blows air across the surface of a container filled with fragrance concentrate.

The electronic components are installed in the housing.

The operating parameters are set at the control unit.

The **DUFTDOS type AK1** can be used to blow **one fragrance** into the cabin. The device is equipped with a small compressor.

With the **DUFTDOS type AK2** you can choose between **2 different fragrances**. The device is equipped with two small compressors.



Figure 4, Control unit

3.2.2 Button plate (option)

The scenting can be started with the button plate.

The button plate is available as a 1x version (AK1) or 2x version (AK2) and is supplied with the corresponding flush-mounted box.

For details about the flush-mounted box, see supplementary sheet “**BB DW 001-03 Installation flush-mounted box V2**” in the appendix.



Figure 5, Button plate 2x

3.2.3 Fragrance container

The fragrance container contains a filter star and the fragrance concentrate. The filter star is used to evaporate the fragrance concentrate.

The small compressor blows the evaporating fragrance concentrate from the fragrance container into the line to the inlet nozzle.

Attention! Pay attention to the maximum fill volume of 50 ml.



Figure 6, Fragrance container + filter star

3.2.4 Inlet nozzle (standard)

The inlet nozzle is used for the inflow and distribution of the fragrance flow in the cabin.



Figure 7, Inlet nozzle

3.2.5 Inlet nozzle with heater (option)

The inlet nozzle is used for the inflow and distribution of the fragrance flow in the cabin. For ice cabins, the inlet nozzle is cast into a washer together with a heater. The heating is necessary to prevent the nozzle from freezing. The heating of the nozzle starts when the device is switched on and takes place fully automated via the control unit. The heater is monitored. If a fault occurs, the system switches off and the fault is shown on the display.



3.3 Device identification / identification plate

Enter the data from your device's identification plate here.

- Field 1: Enter type
- Field 2: Enter code number
- Field 3: Enter serial number
- Field 4: Enter date of manufacturing

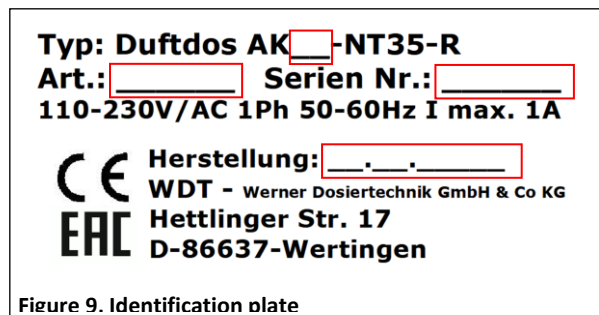


Figure 9. Identification plate

3.4 Technical data

	DUFTDOS-AK1	DUFTDOS-AK2
Dimensions and weights:		
Fragrance hose connection	6x1 mm	6x1 mm
External dimensions	205x310x120 mm (W/H/D)	235x345x145 mm (W/H/D)
Space requirement	400x500x400 mm (W/H/D)	500x500x400 mm (W/H/D)
Space requirement, including operation and maintenance	700x2000x800 mm (W/H/D)	700x2000x800 mm (W/H/D)
Empty weight/operating weight	3 kg / 3 kg	4 kg / 4 kg
Connection data		
Electrical connection	Input voltage 100-240 VAC 50-60 Hz, 90 W, safety plug	Input voltage 100-240 VAC 50-60 Hz, 160 W, safety plug
Compressor	The compressor must be selected for the correct voltage when ordering, either 110 V/60 Hz or 240 V/50 Hz	
Protection class	IP44	
Operating data:		
Medium temperature	5°C to 45°C	
Ambient temperature technical room	5°C to 35°C	
Humidity technical room	max. 70%	
Ventilation (in and out)	Recommended for the technical room	
Maximum evaporation capacity	approx. 5 ml fragrance concentrate in 24 hours The evaporation capacity depends on several parameters: <ul style="list-style-type: none"> • Parameter setting fragrance dosing and pause time • The air temperature in the technical room • The quality of the fragrance concentrate and the fragrance type 	

3.5 Transport/storage

Please check the device immediately upon receipt for potential transport damage.



ATTENTION!

The device may be damaged by frost or high temperatures. Avoid exposure to frost during transport and storage! Do not store systems and devices next to objects with strong heat emission or in direct sunlight. The device may only be transported and stored in its original packaging. Please ensure careful handling.

The device may only be transported with an emptied fragrance container, otherwise the fragrance concentrate in the device would leak out.

3.5.1 Storage of fragrance concentrate



CAUTION!

Please comply with the fragrance concentrate manufacturer's safety data sheet!

These are some of the points that must be observed:

- The fragrance concentrate may only be stored in the appropriately identified original plastic containers.
- Fragrance concentrates must be stored in such a way that any leaks can be detected, absorbed and removed immediately.
- Fragrance concentrates must be stored in an appropriately sized collecting tub.
- The specifications of TRGS 510 and local regulations must be observed.
- The fragrance concentrate should be stored at room temperature.

See also *Chapter 2.2.1 Handling of chemicals*.

4 Installation

The tasks described here must only be performed by appropriately qualified personnel from a specialist company. Alternatively, the work can be carried out by persons who have read and understood the entire Operating Instructions.

4.1 Select the installation site

The installation site must have the following properties:

1. The installation site must be frost-proof.
2. The system must be protected from direct sunlight.
3. An electrical power connection with an isolated ground socket must be available.
4. It is recommended that the storage space be well aerated and ventilated.
5. There must be no aggressive atmosphere (due to chlorine, fragrance, acid or similar) at the installation site.

4.2 Installation instructions (suggested installation)

The device is installed on a wall in the technical room. Pay attention to the space required for operation and maintenance of the device, see *Chapter 3.4 Technical data*.

- a) Warning and information notices must be installed in compliance with locally applicable accident prevention regulations at the locations provided!
- b) Do not bend the dosing lines

Installation plan

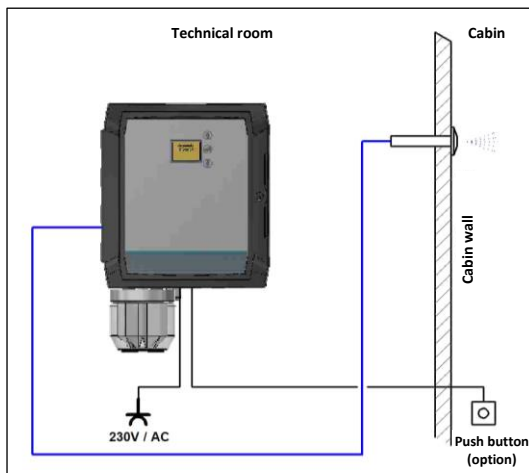


Figure 10, Installation plan DUFTDOS-AK1

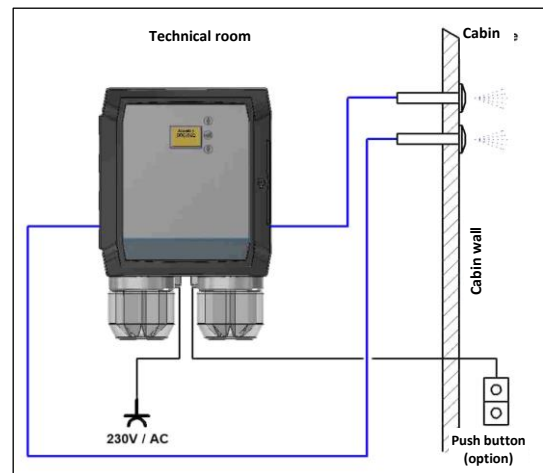


Figure 11, Installation plan DUFTDOS-AK2

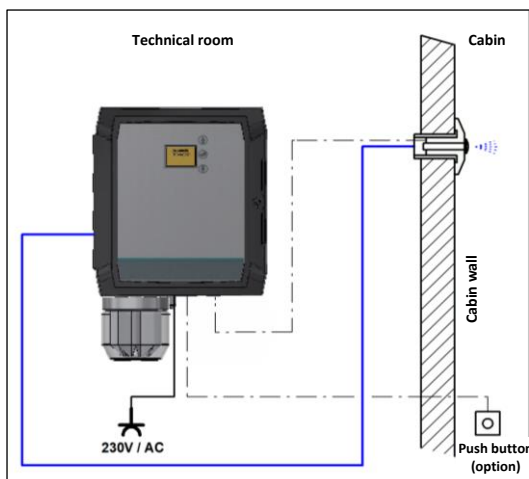


Figure 12, Installation plan DUFTDOS-AK1 with heater

4.3 Install control housing



Tip!

The device should preferably be installed on a building wall. The device should not be installed on the wall of the wellness cabin to prevent the vibrations of the built-in compressor from being transmitted to the cabin wall/bathers.

During installation, ensure short connection paths for the fragrance lines.

- Install the DUFTDOS-AK dosing device at a freely accessible location in the technical room.
- Attach the control housing to the wall using the wall brackets and 4 screws.

4.3.1 Open/close the control housing



ATTENTION!

The electronic components in the devices are sensitive to electrostatic discharges. The generally accepted safety precautions for ESD-sensitive devices must be observed when handling the devices.

In particular, the following applies for work on the control board:

- Only unplug or plug in connectors when they are disconnected from the power supply.
- As the person handling the device, please discharge yourself electrostatically for at least 5 seconds prior to directly touching the devices, e.g., by touching a grounded part of the system or by wearing an ESD antistatic wrist strap connected to ground.

Open housing

- Unlock the locking knob (A) with a screwdriver.
 - ⊖ → Lock closed
 - ⊕ → Lock open
- Press down on both recessed grips (B) until the cover snaps open.
- Rotate cover open.

Close the housing

- Rotate cover closed. The recessed grips (B) must snap shut.
- Lock the locking knob (A) with a screwdriver.

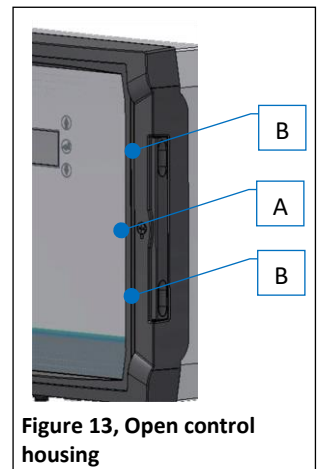


Figure 13, Open control housing

4.4 Install button plate (option)

If the button plate (1x or 2x) is installed in a solid construction wall and it is a humid room, the installation of the flush-mounted box V2 is necessary. For installation of the flush-mounted box, see supplementary sheet “**BB DW 001 Installation flush-mounted box V2**” in Chapter 10 Appendices. In a stud wall such as a sauna wall (wooden panelling), the necessary orifice for the push button is created with a box drill and the push button is mounted on the wooden panelling.

- The push button cable (standard 7m) is equipped with a plug. In order to be able to lay the cable, we recommend laying an empty pipe with a diameter of 32 mm from the dosing device to the button plate. During installation, make sure that the empty pipe is not angled, but laid in bends with a radius of at least 30cm.

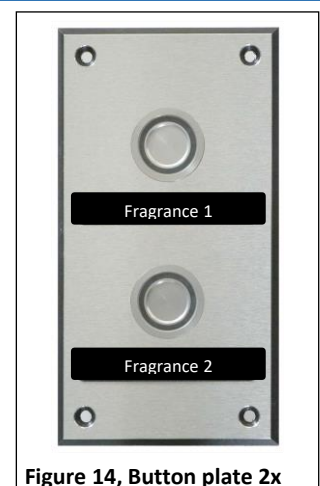


Figure 14, Button plate 2x



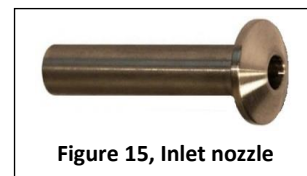
- b) Pull in the ready-to-plug-in push button cable and connect it to the device.

ATTENTION!

In humid rooms, seal the button plate against the wall with a suitable sealant to prevent any humidity from penetrating behind the button plate - danger of corrosion.

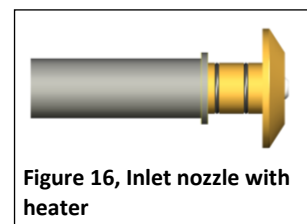
4.5 Install and connect the inlet nozzle

- a) Select a suitable place for installing the inlet nozzle. 2 inlet nozzles are installed with type AK 2. Ensure short line paths.
- b) Install the inlet nozzle close to and at the head height of the bathers to provide a pleasant olfactory experience.
- c) Drill a hole with D=10 mm diameter in the cabin wall.
- d) Install the inlet nozzle in the cabin wall (glue it in place) and lay and connect the hose line from the control housing to the inlet nozzle.
- Do not bend the hose line
 - Preferably lay the hose line in a cable duct or in an electrical installation pipe
 - Cut the hose line at right angles, using a sharp knife.
 - Push the hose line in as far as it will go at the inlet nozzle and at the control housing
- e) In humid rooms, ensure that the installation is leak-proof.



4.6 Install and connect the inlet nozzle with heater

- a) Select a suitable place for installing the inlet nozzle. Ensure short line paths.
- b) Drill a hole with a diameter of approx. 40 mm in the cabin wall.
- c) Glue the PVC wall sleeve included in the scope of delivery into the drill hole.
- d) Push the cable of the nozzle heater through the wall sleeve.
- e) Push the PTFE dosing line through the wall sleeve and connect it to the inlet nozzle.
- f) Push the washer with the inlet nozzle into the wall sleeve
- g) Lay the hose line and the connection cable from the wall sleeve to the control housing and connect them to the control housing.
- Do not bend the hose line
 - Preferably lay the hose line and the connection cable in a cable duct or in an electrical installation pipe
 - Cut the hose line at right angles, using a sharp knife.
 - Push the hose line in as far as it will go at the inlet nozzle and at the control housing
- h) In humid rooms, ensure that the installation is leak-proof.



4.7 Establish electrical connection

- a) Ensure that the isolated ground socket is earthed.
- b) Switch off the mains switch on the device.
- c) Insert the mains plug into the isolated ground socket.

5 Commissioning

5.1 Commissioning - remarks

The tasks described here must only be performed by appropriately qualified personnel from a specialist company. Alternatively, the work can be carried out by persons who have read and understood the entire Operating Instructions. Prior to commissioning, the installed system must be checked for proper installation.

For commissioning, use the commissioning protocol from *Chapter 9.3*.

The device comes partially loaded with ex works settings. When the device is switched on for the first time or after a software reset, the device starts automatically with the start query (see the following chapter). Adjust the control parameters to the desired operating mode during commissioning and enter them in the operation data sheet in *Chapter 9.4*.

5.2 Commissioning works

Ensure that the device has been correctly installed and connected.

5.2.1 Fill/replenish fragrance concentrate

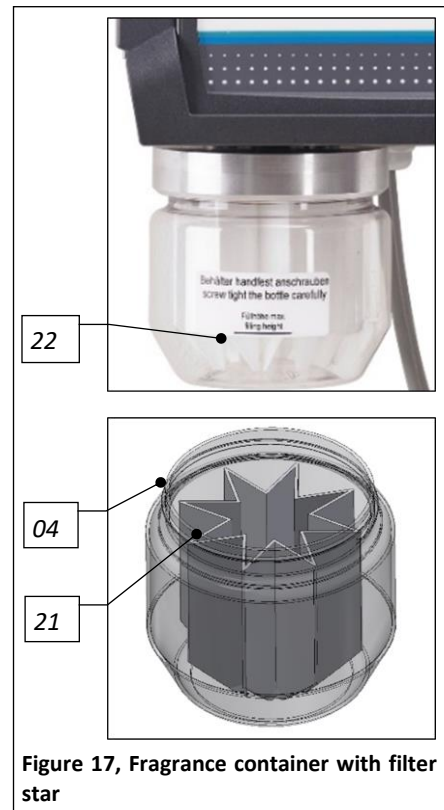
Key

04. Fragrance container

21. Filter star

22. Fill level marking, 50 ml

- Unscrew the fragrance container (04) from the aluminium holder and clean it, if necessary, or use a new fragrance container.
- Fill the desired fragrance concentrate into the fragrance container up to the fill level marking (22), max. 50 ml.
- Insert a new, clean filter star (21) in the fragrance container.
- Only use suitable fragrance oil concentrates for room scenting!
- Screw the fragrance container back into the aluminium holder.



5.2.2 Establish power supply

- Ensure that all installation work has been completed. Observe the sequence of the commissioning work.
- Insert the mains plug into the power socket.

6 Operation/service

6.1 General

The tasks described here may only be carried out by appropriately trained and instructed personnel. Alternatively, the work may be done by operating personnel who have read and understood the entire operating instructions.

Once all preparations for the commissioning have been completed, the operation can be started. Turn on the device at the mains switch (unless this has already been done).

6.2 Control unit - Software

The control is operated via the device's control unit (display with 3 buttons).

Overview control unit

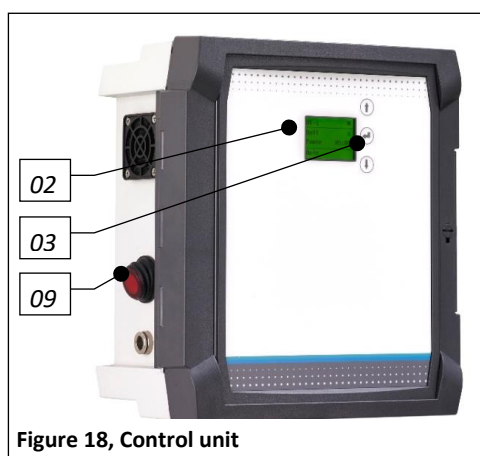


Figure 18, Control unit

Key

- 02. Display
- 03. 3 buttons for operating the display
- 09. Mains switch

Operating the display

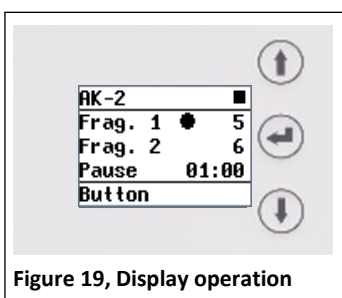


Figure 19, Display operation

The device is operated via the 3 operating buttons next to the display.

Use the **arrow keys** to navigate **up or down** or to set numerical values.

Use the **Enter key** to navigate to the selected **sub-menu** and **back**.



Tip!

The display views shown here refer to the DUFTDOS-AK2 device type. The views of the DUFTDOS-AK1 device type may differ slightly.

6.2.1 Switch on DUFTDOS-AK / start query

Switch on the device at the mains switch.

Start query/Switch on the device for the first time

When the unit is **switched on for the very first time**, or after it has been reset to the **factory settings**, a start query occurs automatically. For this purpose, the requested parameters such as language, operation mode, dosing time 1, pause time 1, dosing time 2, pause time 2, push button cycle must be entered. The parameters are shown and queried in sequence. **After successful entry, the device is ready for operation.**

Language ▶ English ● Deutsch français русский	Operation ▶ Button ● Auto Ext.	Dosing time s <u>5</u>	Pause time m:s <u>01:00</u>
--	--	-------------------------------------	--

Switch the device on again

If the start query was carried out, the device starts in the **operating menu** the next time it is switched on and is **immediately ready for operation.**

The display is illuminated. The display shows the preset times.

AK-2 ■	⇒ Device name and operating contact
Frag. 1 ● 5	⇒ Set fragrance dosing time 1 and push button symbol
Frag. 2 6	⇒ Set fragrance dosing time 1 and push button symbol
Pause 01:00	⇒ Set pause time
Button	⇒ Operation mode and cycle time, if necessary

Operating contact: ■

The operating contact is used to switch the device to standby mode via an external signal. In standby mode, only the parameters and test functions can be operated.

The operating contact function is active in all operation modes and is always displayed.

■ → **Normal operation** → the operating contact is closed, the device is ready for operation

→ **Standby operation** → the operating contact is open → No scenting is possible; parameter settings can still be made

Selected function: ●

● → This fragrance is activated

Dimming the display

If **no input** occurs for 60 seconds, the background illumination is dimmed (standby mode). The background illumination is reactivated by pressing a key.

6.3 The operating menu

After switching the device on at the lateral mains switch, the **operating menu** is displayed.

AK-2 ■	AK-2 ■	AK-2 ■
Frag. 1 ● 5	Frag. 1 ● 5	Frag. 1 ● 2
Frag. 2 6	Frag. 2 5	Frag. 2 6
Pause 01:00	Pause 04:00	Pause 04:00
Cycle 02:00	Button	Auto

The menu of the control unit is simply structured and easy to operate. Pressing any key switches to the **main menu**. It consists of an operating level with the following menu items:

Main menu

Fragrance ▶ Dosing time Pause time Butt. cycle Operation	▶ Test outputs Test inputs Language Contrast Info	▶ Data log Reset Config
---	---	-------------------------------

Use the 3 operating buttons to navigate in the main menu. The menu functions are explained in the following chapter.

Certain functions can be password-protected against unauthorised modification. Protected functions are marked with a padlock symbol .

After 60 seconds without input, the control unit automatically returns to the operating menu.

Any unsaved changes will be lost in this process.

6.3.1 Operation modes

Operation
▶ Button
Auto
Ext.

There are 3 operation modes to choose from:

Push button operation mode

- Scenting is carried out by pressing a push button in the cabin according to the set fragrance pause times (cycle time).
- Scenting ends when the set push button cycle time has elapsed.
- A new scenting can be started after the cycle time has elapsed.
- The operating contact must be closed.

Automatic operation mode

- Scenting takes place automatically according to the set fragrance pause times with the set fragrance.
- The operating contact must be closed.

External operation mode

- Scenting takes place according to the set fragrance pause cycle, as long as the external contact is active.
- The operating contact must be closed.

Control for fragrance 1 via push button input 1 (SL10 1+2) and for fragrance 2 via push button input 2 (SL10 1+5). The external control must be carried out via a potential-free contact.

Set the desired operation mode and use the arrow key to navigate back to the main menu.

6.3.2 Select the fragrance

This function is only available for device type AK2. The setting of the desired fragrance depends on the set operation mode.

Select fragrance - Push button operation mode

In the **Push button operation mode**, the fragrance is selected via the push button in the cabin, which starts the fragrance dosing for the **cycle time**

Select fragrance - Automatic operation mode

Fragrance
▶ Frag. 1
Frag. 2

Select the desired fragrance and confirm with Enter. This fragrance is used as of now.

Select fragrance - External operation mode

In the **External operation mode**, the fragrance is selected via the external control. The fragrance dosing will be active for the duration of the control.

6.3.3 Dosing time

Dosing time
▶ Frag. 1
Frag. 2
Esc

The dosing time defines the time period during which the small compressor runs and the fragrance is blown into the cabin.
Select the desired fragrance, set the dosing time for the fragrance and navigate back to the main menu with the Enter key.

Dosing time
s
<u>5</u>

The dosing time is counted down in the operating menu during dosing.

6.3.4 Pause time

Pause time
▶ Frag. 1
Frag. 2
Esc

The pause time defines the time period between 2 dosing times.
Select the desired fragrance and set the pause time.
The scenting is locked for the set time period.

Pause time
m:s
<u>01:00</u>

The pause time is counted down in the display.

6.3.5 Push button cycle (in push button operation mode)

Butt. cycle
m:s
<u>05:00</u>

The push button cycle defines the **cycle time** during which the set dosing and pause times are constantly repeated. The push button cycle is started via the corresponding push button in the cabin.
Set the desired time for the push button cycle and navigate back to the main menu with the Enter key.

Butt. cycle
Only possible in Button-Mode

The **cycle time can only be set in the push button operation mode.**

6.3.6 Test output



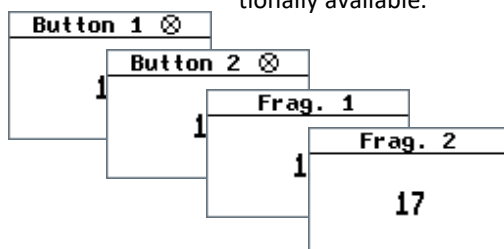
Tip!

“Test functions” are used for function control in order to narrow down possible faults. For test functions, the time is set to 20 seconds and cannot be changed. The test function can be prematurely cancelled with the Enter key.

Test outputs
▶ Button 1 ⊗
Button 2 ⊗
Frag. 1
Frag. 2

Error
▶ Esc

Select the desired test function and start with the Enter key. The corresponding output is activated for 20 seconds. (Push button is illuminated, compressor is running.)
A running test can be cancelled with the Enter key.
Only for the **AK1 with heated nozzle**, an additional test is displayed where the heater’s power consumption can be read. At a value of 60 to 100 mA, everything is fine.
Use the ESC key to navigate back to the main menu.
For the **version with a heater**, the compressor and heating test functions are additionally available.



6.3.7 Test input

Test inputs	
Button 1	<input type="radio"/>
Button 2	<input type="radio"/>
op. contact	<input checked="" type="radio"/>

The Test input menu shows which electrical input has an active signal.
 If a black dot ● is displayed, the **electrical signal** is active (contact closed).
 If a black circle ○ is displayed, **no electrical signal** is active (contact open).

6.3.8 Language

Language	
▶ English	<input checked="" type="radio"/>
Deutsch	<input type="radio"/>
français	<input type="radio"/>
русский	<input type="radio"/>

Select the desired language for the operating menu and confirm with the Enter key.
 Use the Enter key to navigate back to the main menu.

6.3.9 Contrast

Contrast	
8	

Set the contrast at the display and confirm with the Enter key.

Use the Enter key to navigate back to the main menu.

6.3.10 Info

AK - 2
V 1.0.0
Sn: 00000
Date
01.01.2021

Here, you can find information about the device type and software version.

Use the Enter key to navigate back to the main menu.

6.3.11 Data log

Modification	
Operation	
Button	▼
Ext.	▼
01/50	

The past 50 actions are stored in the Data log menu.

Use the Enter key to navigate back to the main menu.

6.3.12 Factory reset

Passuord	
▲	
0 * * *	
▼	

The parameters can be reset here to the factory settings. Afterwards, the device behaves as it did when it was switched on for the first time; the **start query** occurs as described in *Chapter 6.2.1*.

The factory reset is **always password-protected**.

Reset	
Yes	
▶ No	

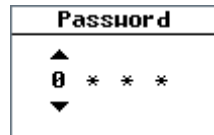
Yes: → A password is requested, after which the device is reset to the factory settings. **The password is: 0123**

No: → The menu is exited without any changes to the settings.

6.3.13 Config / password protection / push button

In the Config menu, password protection can be activated and configurations can be set for the push button illumination.

Config - password entry



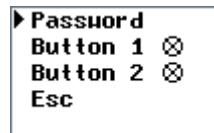
The Config menu itself is **always password-protected**.

The password is preset and cannot be changed.

The password is: 0123

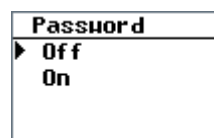
If an incorrect password was entered, the display jumps back to the main menu.


Config - Switch password protection on and off



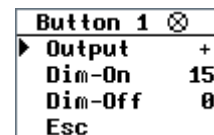
When password protection is activated, the following parameters are protected with a password.

- Dosing time
- Pause time
- Push button cycle
- Operation mode
- Language



Password-protected menus are marked with a padlock symbol  in the main menu.

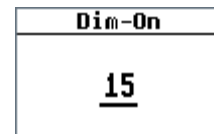
Config - Configure push button



The push button light can be configured individually here.

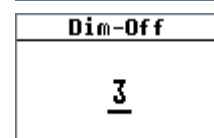
Output:

A signal reversal of the push button output is possible here. The setting depends on the type of push button.



Dim on:

Set the brightness level of the push button illumination when the **push button cycle is active**.



Dim off:

Set the brightness level of the push button illumination when the **push button cycle is inactive**. This means: No fragrance is produced

For device type AK2: Repeat the procedure for push button 2.

6.4 Button plate function

By pressing a push button, the cycle time for fragrance generation is started and the fragrance is blown into the cabin.

This function is active in the push button operation mode.

The button plate is available as a 1x or 2x version, depending on the device design.

With the device type AK2 (2x push button), the desired fragrance can be selected via the push button.

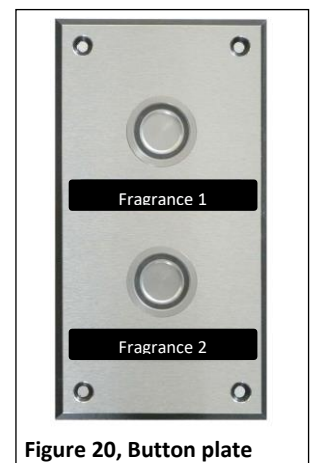


Figure 20, Button plate

6.5 Fill/replenish fragrance concentrate

See Commissioning, Chapter 5.2.1, Fill/replenish fragrance concentrate

7 Maintenance, care, faults

7.1 Device maintenance

In order to ensure the proper function of the device, pay attention to the following points:

1. Regular cleaning of the device
2. Stocking of the consumables
3. Renew the filter star every time the fragrance is changed, at least once a year.

Open/close the control housing

For opening and closing the control housing, see *Chapter 4.3.1, page 13*.

7.2 Fault removal



Tip!

It is also possible that switches, the voltage supply or the push buttons are faulty and thus do not transmit any electrical signals.

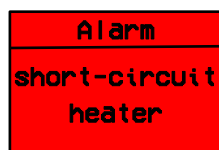
Fault indications

The following fault indications may be displayed. For the removal of fault indications, see the following fault table. Once a fault indication occurs, the device is stopped.



ATTENTION!

If the compressor motor were to continue running when the inlet nozzle is frozen, the fragrance container could burst and the fragrance concentrate could leak out.



Current flow too high; system shutdown. Short-circuit on cable or in heater. → Check/renew the cable and heater.



Electrical interruption in the cable or in the heater. → Check/renew the cable and heater.

Fault table

Fault display/fault	Possible cause	Actions
The device cannot be switched on	<ul style="list-style-type: none"> • Fuse F2 defective • Mains switch defective • Power supply interrupted 	<ul style="list-style-type: none"> • Renew fuse F2 • Check/renew mains switch • Check power supply
Device without function	<ul style="list-style-type: none"> • Software does not react • Incorrect setting • Control board defective 	<ul style="list-style-type: none"> • Conduct a restart • Check/reset settings • Check/renew board
Compressor without function	<ul style="list-style-type: none"> • Compressor motor defective 	<ul style="list-style-type: none"> • Check/renew compressor motor
No fragrance generation	<ul style="list-style-type: none"> • Compressor defective • Incorrect fragrance concentrate • Dosing line damaged, bent, blocked 	<ul style="list-style-type: none"> • Check/renew compressor • Replace fragrance concentrate • Renew dosing line
No pressure build-up	<ul style="list-style-type: none"> • Compressor defective 	<ul style="list-style-type: none"> • Check/renew compressor

8 Decommissioning – Storage – Disposal

8.1 General

In the event of decommissioning, the device must be emptied completely or protected against frost!

8.2 Decommissioning

Switch off the device at the mains switch for decommissioning.

Decommissioning for more than 30 days

- Remove the filter star, empty and clean the fragrance container



ATTENTION!

For recommissioning, follow the instructions in the “Commissioning” chapter and pay attention to the points in the commissioning protocol.

8.3 Disposal of packaging, electrical devices and operating materials

Packaging

Dispose of the packaging in an environmentally friendly way

The device is packaged to prevent damage during transport. This packaging is a raw material and is therefore reusable or can be returned to the raw material cycle.

Product

The treatment and disposal of discarded electrical devices must be carried out in an environmentally friendly manner, and they must be returned to the material cycle.

- The locally applicable provisions must be complied with.
- The components of the electrical and electronic devices must not be disposed of as residual waste. Electrical scrap and electronic components are subject to special waste treatment and may only be disposed of at authorised collection points!
- For devices in Germany: If no collection point is available, return the device to the manufacturer WDT GmbH & Co KG.
- For devices outside of Germany: Obtain information on the local regulations for the separate collection of electrical and electronic products. Use the available, authorised collection points for the disposal of your device.

Batteries

If the product contains regular or rechargeable batteries, these must be disposed of separately from the product.

Operating materials

If operating materials are subject to special regulations, please pay attention to the corresponding information on the packaging. When in doubt, information may be obtained from the institution responsible for disposal at your location. If this is not possible, dispose of as hazardous waste.

9 Documents

9.1 Declaration of conformity

WDT Werner Dosiertechnik GmbH & Co. KG
 Hettlinger Straße 17 | D-86637 Wertingen
 Tel. 0049 8272 98697-0 | Fax 0049 8272 98697-19
 info@werner-dosiertechnik.de | www.werner-dosiertechnik.de



EG-Konformitätserklärung
 EC declaration of conformity
 Déclaration de conformité UE

im Sinne der EG-Maschinenrichtlinie 2006/42/EG, Anhang II 1.A
 as defined in the ECMachinery Directive 2006/42 / EC, Annex II, Part 1A
 selon la directive européenne machines 2006/42 / CE, annexe II 1.A

Hersteller WDT - Werner Dosiertechnik GmbH & Co. KG
Manufacturer Hettlinger Str. 17
Fabricant 86637 Wertingen-Geratschhofen

Beschreibung und Identifikation des Produktes:
Description and identification of the product:
Description et identification du produit :

Typenbezeichnung:	Art:
• DUFTDOS AK 1 bis AK 4	Maschine

Funktion: Dosiergerät zur Duftstoffdosierung
Function: Dosing device for fragrance dosing
Fonction: Dispositif de dosage pour le dosage de parfum

Es wird ausdrücklich erklärt, dass das Produkt allen einschlägigen Bestimmungen der folgenden EG-Richtlinien entspricht:
It is expressly stated that the product complies with all relevant provisions of the following EC directives
Il est explicitement dit que le produit est conforme à toutes les dispositions pertinentes des directives CE suivantes :

2006/42/EG RICHTLINIE 2006/42/EG DES EUROPÄISCHEN PARLAMENTS UND DES RATES vom 17. Mai 2006 über Maschinen und zur Änderung der Richtlinie 95/16/EG (Neufassung)

Die folgenden harmonisierten Normen nach Artikel 7 (2) wurden angewandt:
The following harmonized standards as defined in Article 7 (2) were applied:
Les normes harmonisées suivantes selon l'article 7 (2) ont été appliquées :

- EN ISO 12100:2010 Sicherheit von Maschinen - Allgemeine Gestaltungsleitsätze - Risikobeurteilung und Risikominderung
- EN ISO 13849-1:2015 Sicherheit von Maschinen – Sicherheitsbezogene Teile von Steuerungen – Teil 1: Allgemeine Gestaltungsleitsätze
- EN ISO 13849-2:2015 Sicherheit von Maschinen – Sicherheitsbezogene Teile von Steuerungen – Teil 2: Validierung
- EN ISO 14120:2015 Sicherheit von Maschinen – Trennende Schutzeinrichtungen Allgemeine Anforderungen an Gestaltung, Bau und Auswahl von feststehenden und beweglich trennenden Schutzeinrichtungen
- EN 60204-1:2018 Sicherheit von Maschinen – Elektrische Ausrüstung von Maschinen – Teil 1: Allgemeine Anforderungen

Die in der Gemeinschaft ansässige Person, die für die Zusammenstellung der technischen Unterlagen bevollmächtigt ist:
The designated person who is authorized to draw up the technical documentation:
La personne établie dans la communauté qui est autorisée à constituer le dossier technique:

Name: Werner Dosiertechnik GmbH & Co KG
Straße/Nr.: Hettlinger Straße 17
PLZ Stadt: 86637 Wertingen



WDT WERNER
 Dosiertechnik GmbH & Co.KG
 86637 Wertingen-Geratschhofen
 Tel. 0 87 72 9 86 97-0 - Fax 9 86 97-19

Wertingen, 14.07.2021
 Ort/City/Place, Datum/Date

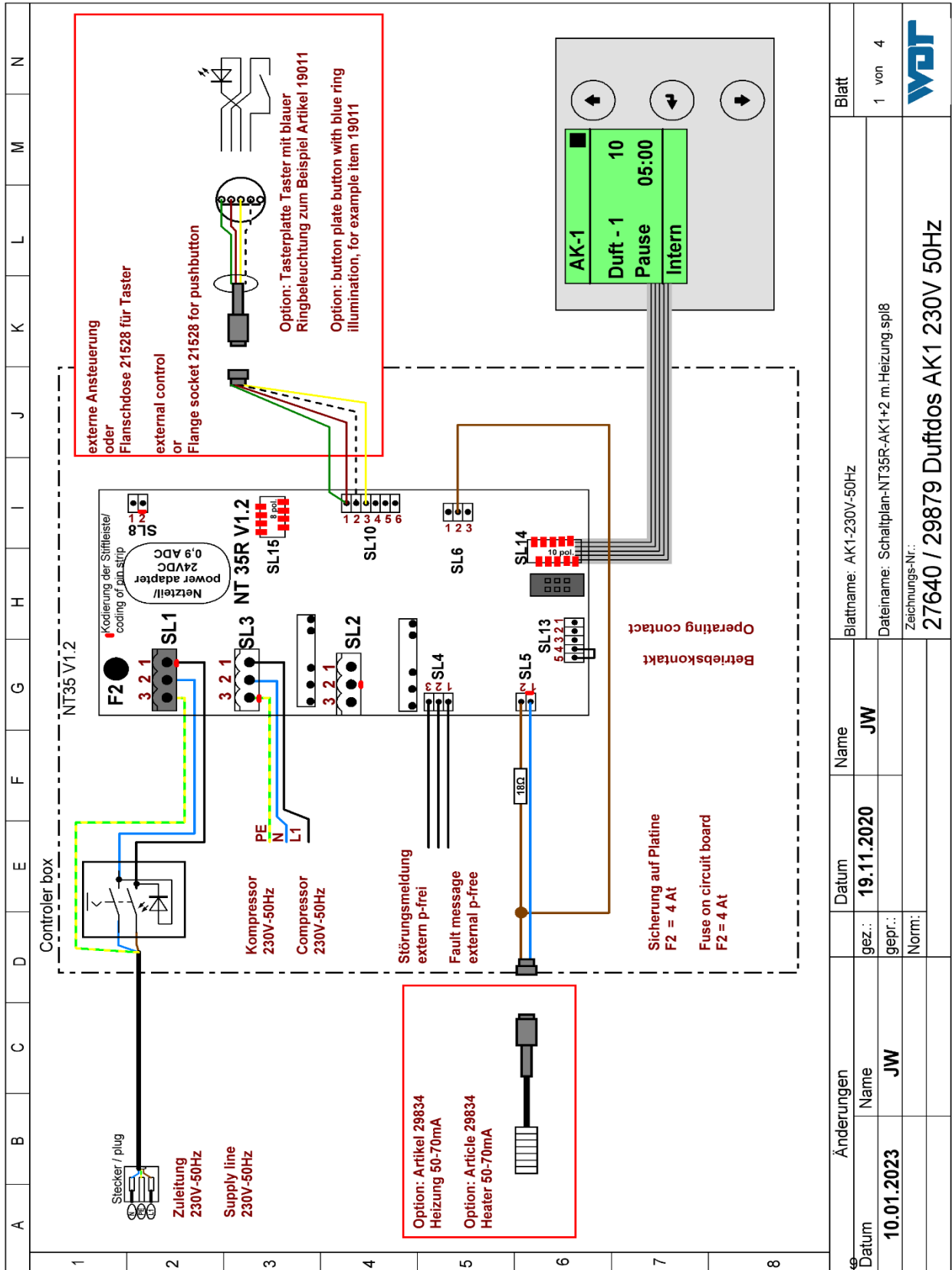
Unterschrift/signature Jochen Rieger, Director



9.2 Wiring Diagram

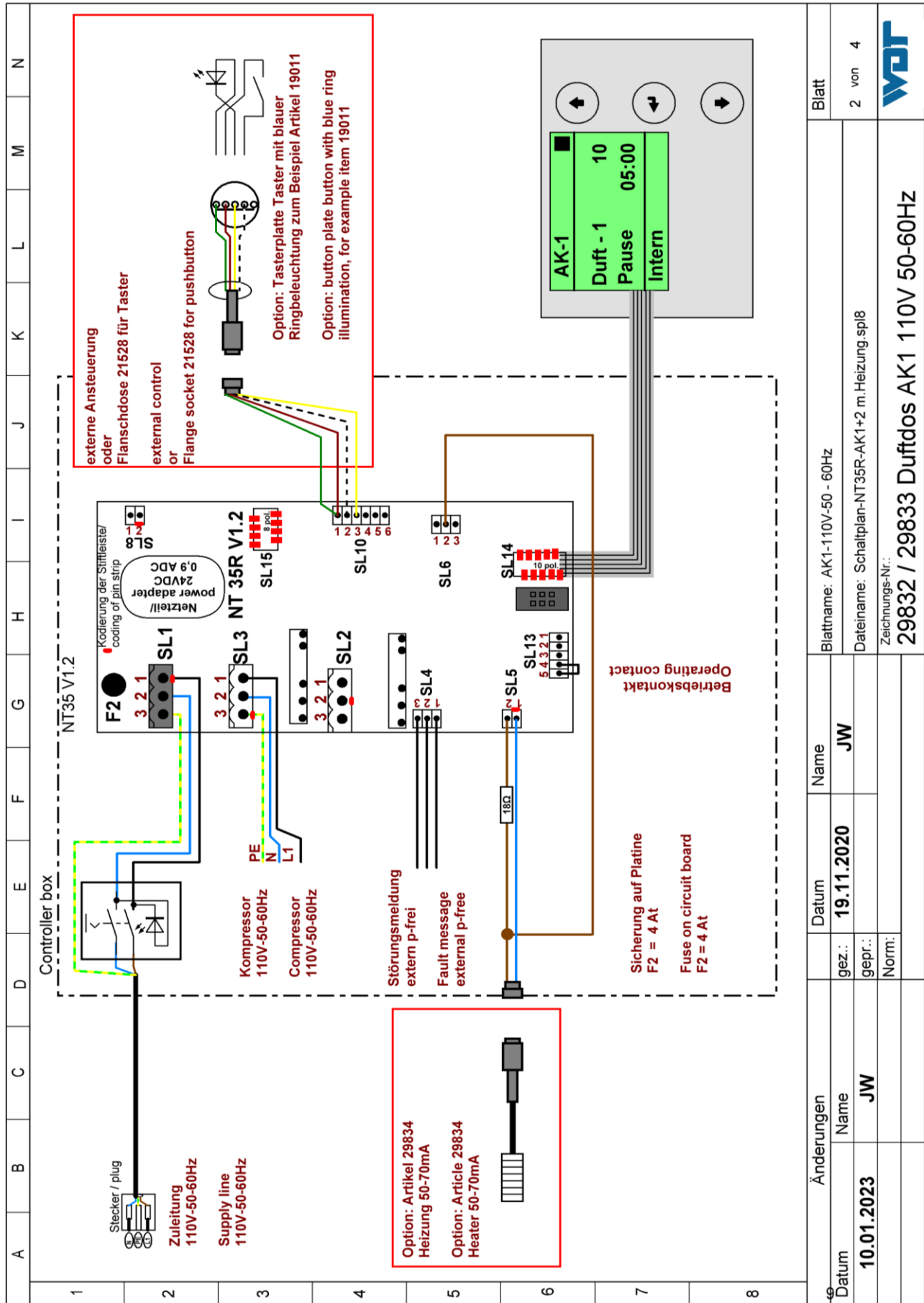
Notice for wiring diagrams: The wiring diagrams can also be found near the device's control cabinet.

9.2.1 Wiring diagram DUFTDOS-AK1-230V/50Hz

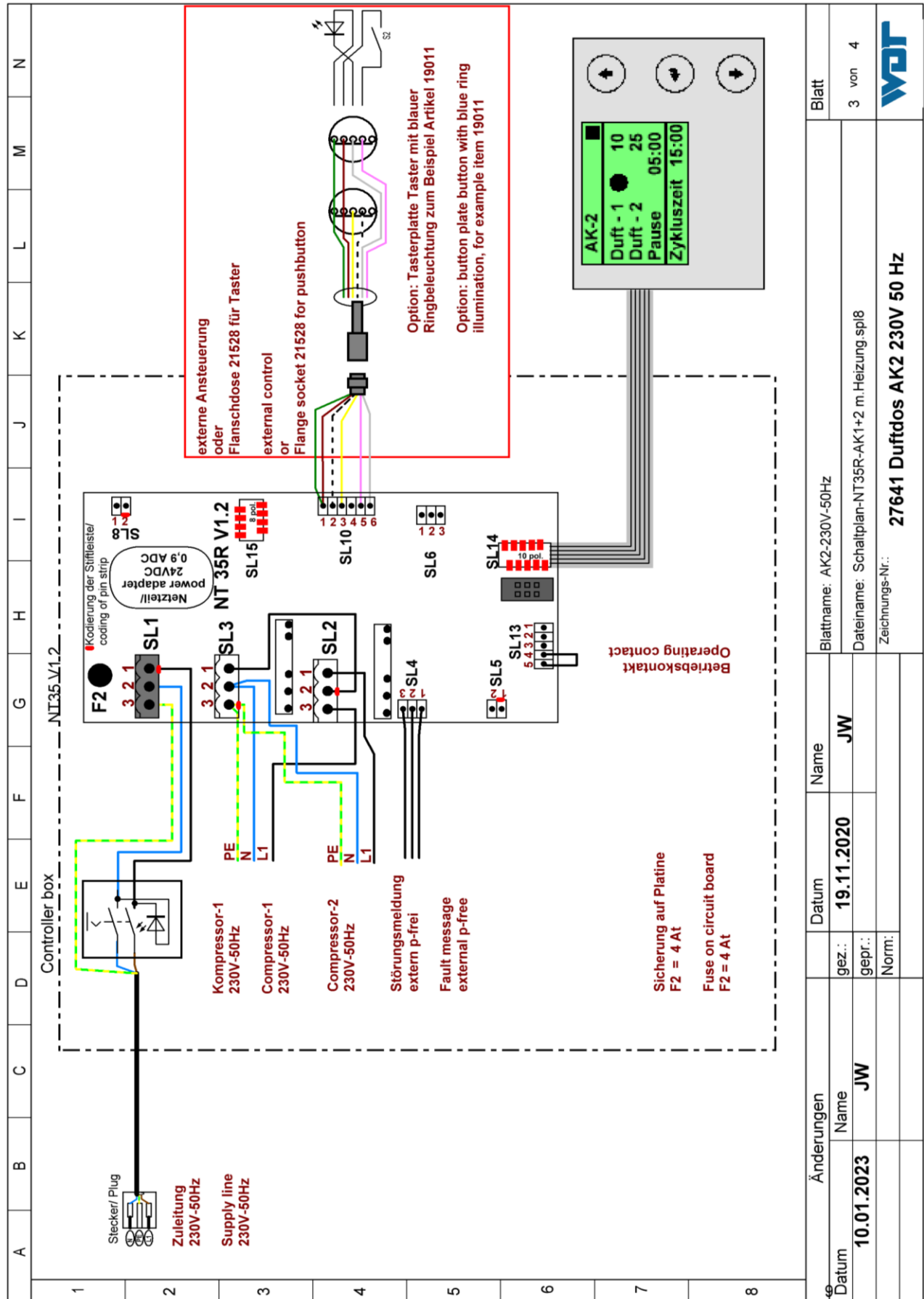


The heating for the nozzle is only available with the AK 1; this must be specified separately when ordering. A subsequent conversion is not possible.

9.2.2 Wiring diagram DUFTDOS-AK1-110V/50-60Hz



9.2.3 Wiring diagram DUFTDOS-AK2-230V/50Hz



9.3 Commissioning protocol / instruction

This protocol is to be completed by the commissioning technician! Without a completed and signed commissioning protocol, all warranty claims become void!

The commissioning protocol is located in the accompanying documentation in *Chapter 10*.

9.4 Operation data sheet



Tip!

During commissioning, enter the operating parameters in the operation data sheet!

Operation data sheet

Parameter	*	Factory settings	Setting range	Password - possible	Date at commissioning	Optimised during operation, date
Language	-1-	individual	DE, EN, FR, RU	no		
Operation mode	-2-	Internal	---	yes		
Dosing time 1 (fragrance 1)	-3-	10 seconds	1-60 seconds	yes		
Pause time 1 (fragrance 1)	-4-	8 minutes	1-60 m	yes		
Dosing time 2 (fragrance 2)	-5-	10 seconds	1-60 seconds	yes		
Pause time 2 (fragrance 2)	-6-	8 minutes	1-60 m	yes		
Push button cycle	-7-	10 minutes		yes		
Contrast		8	0-15	no		
Info				no		
Password protection for user menu		ON	ON / OFF	yes		
Push button 1 output		+	+ / -	yes		
Push button 1 dimming on		15	0-15	yes		
Push button 1 dimming off		0	0-15	yes		
Push button 2 output		+	+ / -	yes		
Push button 2 dimming on		15	0-15	yes		
Push button 2 dimming off		0	0-15	yes		

* : Sequence when switching on directly after a reset to the factory settings

Parameter	*	Factory settings	Setting range	Password - possible	Date at commissioning	Optimised during operation, date
Language	-1-	individual	DE, EN, FR, RU	no		
Operation mode	-2-	Internal	---	yes		
Dosing time 1 (fragrance 1)	-3-	10 seconds	1-60 seconds	yes		
Pause time 1 (fragrance 1)	-4-	8 minutes	1-60 m	yes		
Dosing time 2 (fragrance 2)	-5-	10 seconds	1-60 seconds	yes		
Pause time 2 (fragrance 2)	-6-	8 minutes	1-60 m	yes		
Push button cycle	-7-	10 minutes		yes		
Contrast		8	0-15	no		
Info				no		
Password protection for user menu		ON	ON / OFF	yes		
Push button 1 output		+	+ / -	yes		
Push button 1 dimming on		15	0-15	yes		
Push button 1 dimming off		0	0-15	yes		
Push button 2 output		+	+ / -	yes		
Push button 2 dimming on		15	0-15	yes		
Push button 2 dimming off		0	0-15	yes		

Operation data sheet, --master copy--

Parameter	*	Factory settings	Setting range	Password - possible	Date at commissioning	Optimised during operation, date
Language	-1-	individual	DE, EN, FR, RU	no		
Operation mode	-2-	Internal	---	yes		
Dosing time 1 (fragrance 1)	-3-	10 seconds	1-60 seconds	yes		
Pause time 1 (fragrance 1)	-4-	8 minutes	1-60 m	yes		
Dosing time 2 (fragrance 2)	-5-	10 seconds	1-60 seconds	yes		
Pause time 2 (fragrance 2)	-6-	8 minutes	1-60 m	yes		
Push button cycle	-7-	10 minutes		yes		
Contrast		8	0-15	no		
Info				no		
Password protection for user menu		ON	ON / OFF	yes		
Push button 1 output		+	+ / -	yes		
Push button 1 dimming on		15	0-15	yes		
Push button 1 dimming off		0	0-15	yes		
Push button 2 output		+	+ / -	yes		
Push button 2 dimming on		15	0-15	yes		
Push button 2 dimming off		0	0-15	yes		

* : Sequence when switching on directly after a reset to the factory settings

Parameter	*	Factory settings	Setting range	Password - possible	Date at commissioning	Optimised during operation, date
Language	-1-	individual	DE, EN, FR, RU	no		
Operation mode	-2-	Internal	---	yes		
Dosing time 1 (fragrance 1)	-3-	10 seconds	1-60 seconds	yes		
Pause time 1 (fragrance 1)	-4-	8 minutes	1-60 m	yes		
Dosing time 2 (fragrance 2)	-5-	10 seconds	1-60 seconds	yes		
Pause time 2 (fragrance 2)	-6-	8 minutes	1-60 m	yes		
Push button cycle	-7-	10 minutes		yes		
Contrast		8	0-15	no		
Info				no		
Password protection for user menu		ON	ON / OFF	yes		
Push button 1 output		+	+ / -	yes		
Push button 1 dimming on		15	0-15	yes		
Push button 1 dimming off		0	0-15	yes		
Push button 2 output		+	+ / -	yes		
Push button 2 dimming on		15	0-15	yes		
Push button 2 dimming off		0	0-15	yes		

Commissioning protocol IP-075-EN

DUFTDOS type AK1 und AK2



This protocol is to be completed by the commissioning technician! All warranty claims expire when no completed and signed commissioning protocol is available!

Object: _____ Date: __.__.____

Address: _____

Device type: _____ Year of construction: _____ Serial no.: _____

	Activity	Completed	Comment
1	Initial operation		
1.1	Device checked for correct installation	<input type="checkbox"/>	
1.2	Pipes checked for leaks and correct installation	<input type="checkbox"/>	
1.3	Filled with fragrance concentrate	<input type="checkbox"/>	
1.4	Filter star inserted and fragrance container screwed in	<input type="checkbox"/>	
1.5	Power supply established	<input type="checkbox"/>	
1.6	Device checked for correct operation	<input type="checkbox"/>	
2	Other		
2.1	Operating instructions discussed and handed over	<input type="checkbox"/>	
2.2	Operating and maintenance staff instructed	<input type="checkbox"/>	

Additional remarks:

Commissioning and instruction carried out by: _____

Instructed persons: _____

Signature of commissioner: _____

Operator's counter-signature: _____

Assembly and sealing of the flush mounted box V2 for push button plates



CAUTION !

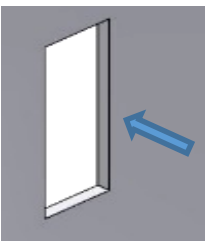
Before starting to work, make the electrical lines volt free and protect them against new connection! Wear protective clothes!



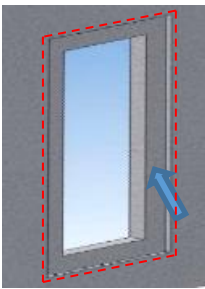
1 Assembly in building panels



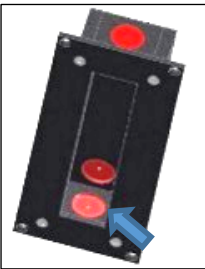
a) Install the empty conduit at the required place!
Diameter empty conduit type 32 (ID 25mm)
Bend radius min. 10cm



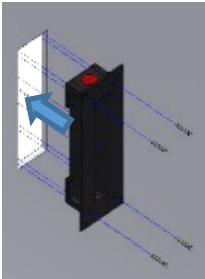
b) Cut out construction plate
 Dimensions:
 1-fold: HxWxD min. 100x67x55mm
 2-fold: HxWxD min. 133x 67x55mm
 3-fold: HxWxD min. 166x 67x55mm
 4-fold: HxWxD min. 200x 67x55mm



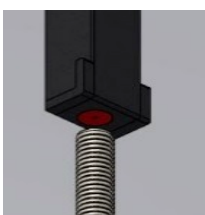
c) Cut a recess to sink the sealing flange with a depth of 3mm
 Dimensions:
 1-fold: HxW min. 130x97mm
 2-fold: HxW min. 163x97mm
 3-fold: HxW min. 196x97mm
 4-fold: HxW min. 229x97mm



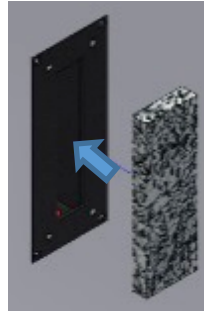
d) Break out an orifice for the empty conduit connection at the desired rated break point



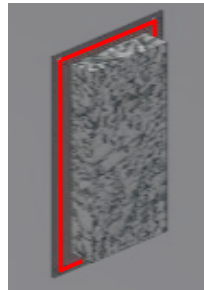
e) Install the flush mounted box and fix with 4 screws if necessary



f) Connect the empty conduit onto the flush mounted box and insert cables



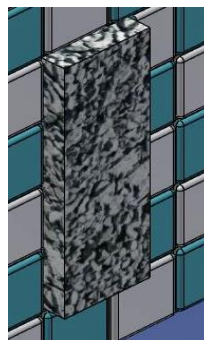
g) Place the supplied construction protection cap in the flush mounted box



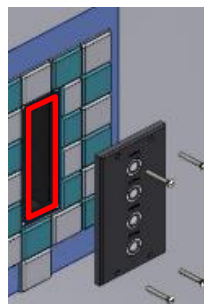
h) Apply sealant for vapour barrier foil



i) Adapt and adhere the vapour barrier foil
No humidity may penetrate!



j) Tile the flush mounted box until the construction protection cap

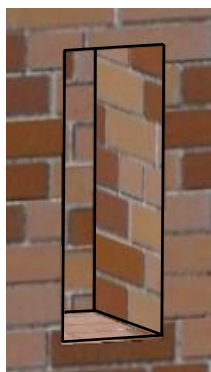


k) Take out the protection cap
 Clamp the push button plate.
Seal the push button plate against the flush mounted box: apply appropriate sealant on the flush mounted box and fix with 4 screws

No humidity may penetrate!

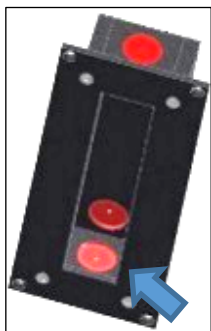
EN - Additional sheet: flush mounted box V2

2 Installation in brickwork

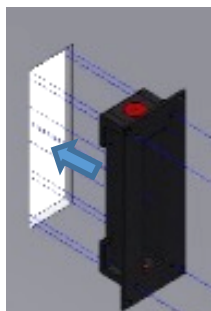


a) Chisel out brickwork for flush mounted box and empty conduit
Diameter empty conduit type 32 (ID 25mm)
Bend radius min. 10cm

Dimensions for break out works
 1-fold: HxWxD min. 105x72x60mm
 2-fold: HxWxD min. 138x72x60mm
 3-fold: HxWxD min. 171x72x60mm
 4-fold: HxWxD min. 205x72x60mm



b) Break out an orifice for the empty conduit connection to the desired rated break point

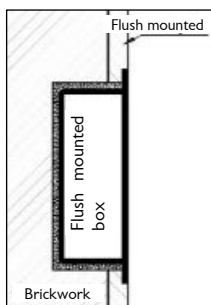


c) Install the flush mounted box and the empty conduit with electrician cast or building foam in the wall, approximately 20 mm protruding due to flush system

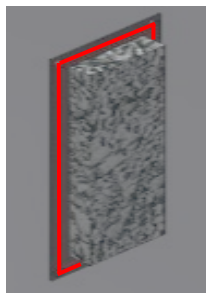
Insert cable



d) Install the supplied construction protection cap in the flush mounted box



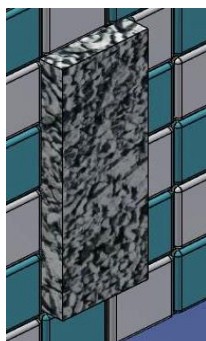
e) Plaster the brickwork so that the flush mounted box flushes with the plaster.



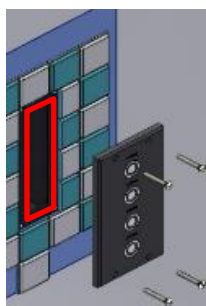
f) Apply sealant for vapour barrier foil



g) Adhere vapour barrier foil
No humidity may penetrate!



h) Enter the flush mounted box until the construction protection cap



i) Remote protection cap
 Clamp the push button plate.
Seal the push button plate against the flush mounted box: apply appropriate sealant on the flush mounted box and fix with 4 screws

No humidity may penetrate!