

# **OKIMAT 2 / OKIMAT 2 IPS OKIMAT IPS / OKIMAT IPS<sub>e</sub> / OKIMAT EPS**

## **Installation Instructions**

**(Translation of the original installation instructions)**



# Foreword

## Document revision history

Version	Date	Modification, change
1.0	04/2015	First release / replaces the OKIMAT 2/3 Installation Instructions
2.0	11/2018	Supplemented with OKIMAT 2 variants, ratings plate, HS-TOPLINE
3.0	11/2019	Declaration of incorporation and of conformity, WEEE
4.0	05/2020	Ratings plate, toggle, declaration of incorporation and of conformity

## Disclaimer and exclusion of liability

DewertOkin is not responsible for damage resulting from:

- failure to observe these instructions,
- changes made to this product which have not been approved by DewertOkin, or
- the use of replacement parts which have not been approved or manufactured by DewertOkin.

## Creation of a complete operating instruction manual for the entire end product

These instructions are only intended to be used by the end-product manufacturer. They should not be given to the operator of the end product. The factual information contained within may be used as a basis when creating the end-product manual.

The warning and danger notices are best suited for use in the end product's manual. However it is not sufficient to simply follow these notices. You should also carry out an internal risk assessment for your end product. This can then be used as the basis for the safety notices in your manual.

These installation instructions do not contain all information required to safely operate the end product. They only describe the installation and operation of the drive as partially completed machinery.

The instructions are intended for the technicians responsible for manufacturing an end product and not for the operators of the end product.

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# 1. General Information

- The OKIMAT name, as used here, also includes the OKIMAT 2, OKIMAT 2 IPS, OKIMAT 2 IPS, OKIMAT IPS, OKIMAT IPSe and OKIMAT EPS configurations.

These installation instructions must be followed closely in order to install this drive successfully and safely in the end product. These instructions are not an operating manual for the end product.

These instructions will help you to minimize danger, repair costs and down times. They will also help you to maximize the reliability and lifespan of the end product.



## CAUTION

The notices in these instructions must be followed! Following the guidelines during installation and connection procedures will help to minimize:

- the risk of accident and injury, and
- damage to the drive system or the end product.

These installation instructions have been written with due care and attention. However, we cannot guarantee that the data, images and drawings are complete and correct nor do we accept any liability for the information contained therein, unless required by law.

### Availability of this document

As manufacturer of the end product, you are obligated to comply with Machinery Directive 2006/42/EC. This directive stipulates that the installation instructions must be kept on file for governmental inspection purposes.

## 1.1 Safety notices within the installation instruction and the operating instructions for the entire machine

The manufacturer of the complete machine (the end product) is only permitted to operate the OKIMAT drive (by itself an incomplete machine)

- when the end product (for which the OKIMAT drive is intended) is in compliance with all protective measures specified in the Machinery Directive 2006/42/EC, and
- when the manufacturer expressly declares the compliance of the end product.

The manufacturer of the end product must create a manual for the users of that product. The safety notices in the end-product manual must be written based on the end product's risk assessment.

## 1.2 Conventions used

Notices which do not relate to safety are indicated in these instructions with a triangle:

- ▶ Triangular notice symbol

### Safety notice explanations



#### **CAUTION**

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

#### **NOTICE**

NOTICE is used to address practices which are not related to personal injury but may result in damage to the product or surroundings.

## 2. Safety notices

### 2.1 Proper and intended usage

The OKIMAT drives are intended to be installed in beds.

- They provide motor adjustment capabilities for movable reclining bed parts. They should be used in conjunction with suitable brackets and mechanics.



#### CAUTION

##### **Risk of accident**

This drive should only be used for the applications described above. Any other use is forbidden. Improper usage can lead to accidents or destruction of the unit. Such non-approved applications will lead immediately to the expiration of all guarantee and warranty claims on the part of the end-product manufacturer against the manufacturer.

#### **Improper usage**

Be sure to follow the notices below concerning improper usage. You should include them in your product manual in order to inform the users of your end product.

The OKIMAT drives should not be used:

- in any environment where combustible or explosive gases or vapours (e.g., anaesthesiology) may be present,
- in a moist environment,
- outdoors,
- in any application that will be cleaned with an automated washing system,
- for raising and lowering loads in industrial or technical applications,
- with forces which exceed those specified on the ratings plate.

The OKIMAT drive can be used by children of 8 years and older, persons with reduced physical, sensory or mental capabilities, or persons with lack of experience or knowledge when they are supervised or instructed concerning the safe use of the device and when they understand the resulting risks. Do not allow children to play with this device. The cleaning and user maintenance must not be carried out by children without supervision.

- You should only use spare parts which have been manufactured or approved by DewertOkin. Only these parts will guarantee a sufficient level of safety.

**Optional: battery-operated reset function**

<b>NOTICE</b>
The battery-operated reset function is not a safety system and does not avert danger.

DewertOkin does not guarantee that the drive will function in the event of a power outage.

If the end-product manufacturer chooses to guarantee the functionality of the end product during a power outage, then the end-product manufacturer is responsible for arranging a mechanism to ensure this functionality.

## **2.2 Selection and qualification of personnel**

The installation of the drive in the end product may only be performed by qualified personnel.

## 2.3 Ratings plate

- The ratings plates shown are an example; the specifications for your drive may differ from this illustration.

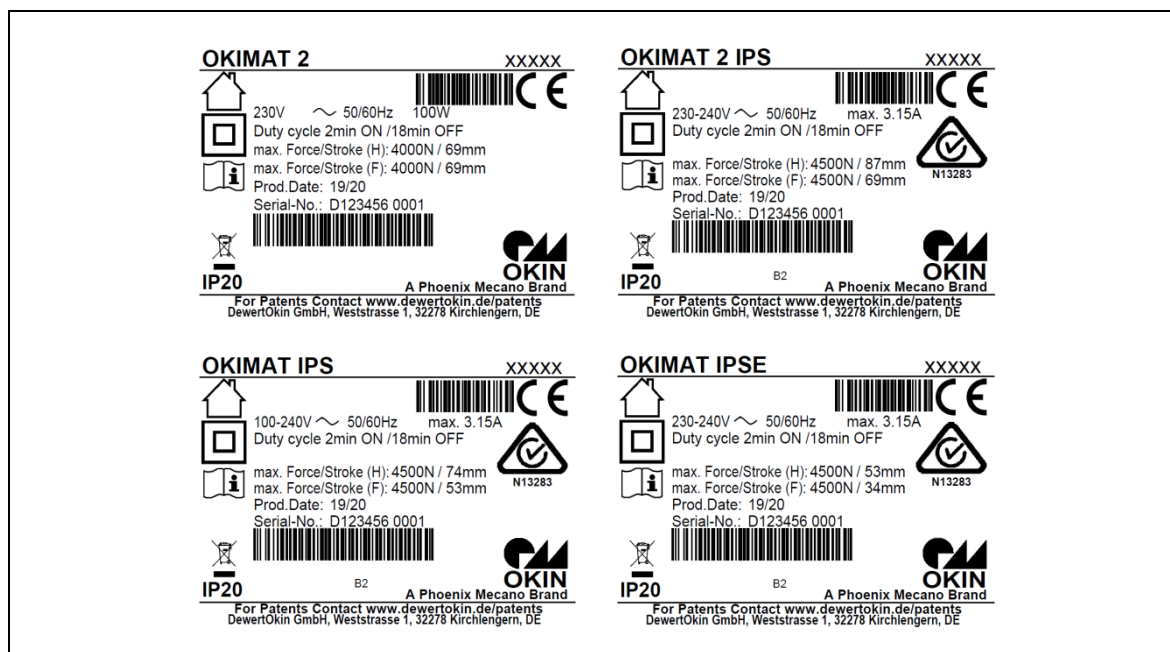


Figure 1 Ratings plates examples

OKIMAT 2 OKIMAT 2 IPS OKIMAT IPS OKIMAT IPSE	Model name
XXXXX	Article number
230V ~ 230-240V ~ 100-240V ~	Input voltage
50/60Hz	Frequency
100W	Rated Power
max. 3.15A	Current consumption
Duty cycle 2min ON / 18min OFF	Intermittent operation / power-on time
max. Force/Stroke (H)	Push force / Stroke (head)
max. Force/Stroke (F)	Pull force / Stroke (foot)
Prod.Date	Calendar week / year
Serial-No.	Serial number for your drive
IP20	Protection degree

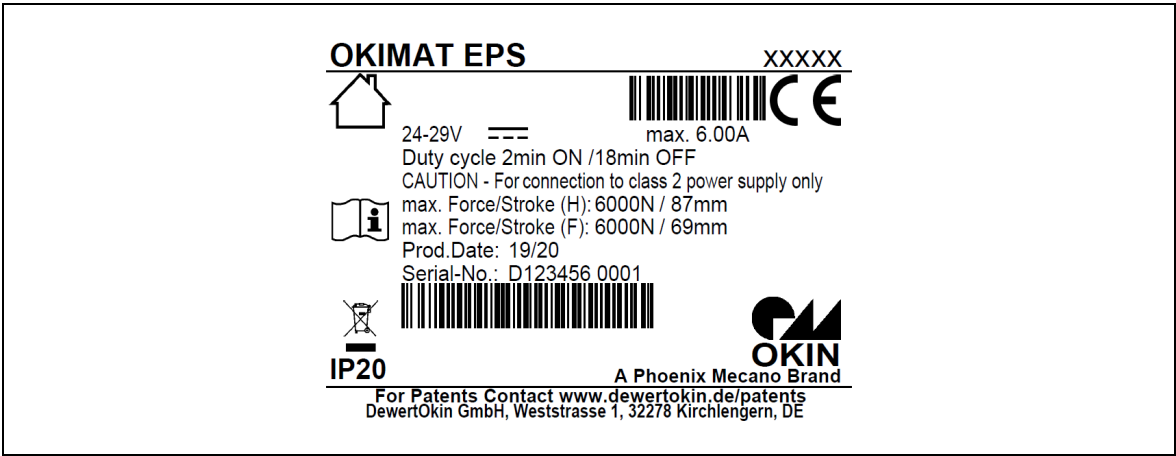







Abbildung 2      Typenschild (Beispiel)

OKIMAT EPS	Model name
xxxxxx	Article number
24-29V ---	Input voltage
max. 6.00A	Frequency
Duty cycle 2min ON / 18min OFF	Intermittent operation / power-on time
max. Force/Stroke (H)	Push force / Stroke (head)
max. Force/Stroke (F)	Pull force / Stroke (foot)
Prod.Date	Calendar week / year
Serial-No.	Serial number for your drive
IP20	Protection degree

	Use in dry rooms only!
	Protection class II
	Always follow the instructions in the manual!
	Follow all special disposal instructions!
	Conformity mark

### 3. Possible combinations

The OKIMAT drives can be combined for use with other DewertOkin components and drives. The following basic combinations are possible:

Options for:	OKIMAT 2	2 IPS	IPS	IPSe	EPS
Cable handset	x	x	x	x	x
Built-in RF receiver and RF hand-held remote control			x	x	
External RF receiver and RF hand-held remote control	x	x	x	x	x

Systems can be customized by combining drives and OKIN controllers. The system components must be connected in a specific order. The mains plug should only be plugged in after all other components are connected.

DewertOkin has separate system instruction manuals containing all information and instructions needed for these systems.

- Only a DewertOkin device should be used to control the drive since they have already been verified to work together.

## 4. Description

The drives units are powered by electrical motors. The back and leg sections of a bed can be adjusted depending on the drive options. The drive is controlled by means of an OKIN controller.

The different drive models vary according to their:

- motor power
- optional reset function
- optional pluggable mains power cord
- optional variant with an internal switched-mode power supply (2 IPS / IPS / IPS<sub>e</sub>)
- optional variant with an external switched-mode power supply (EPS)
- different stroke variants
- integrated RF radio receiver
- country-specific mains power plug
- optional mains cut-off mechanism

### 4.1 Components

The components have a compact design – with two linear adjusting units and a control unit located within an enclosed housing. To facilitate the tool-free assembly process, the two sliders on the side (the shutters) can be removed from the housing.



#### CAUTION

##### Risk of accident

Please follow these operating instructions carefully. You could be injured by fire or electrical shock if you do not follow these assembly instructions.

The appropriate pluggable power supply cord with integrated switched-mode power supply is included, depending on the regional version (USA, continental Europe (EURO plug), the UK, Australia or Japan).

#### NOTICE

Only use the proper power cable that is permitted in your country. Be sure to use the correct plug adapter, as shown in the following illustration.

- For the options OKIMAT 2 IPS / IPS / IPS<sub>e</sub>: There is a delay after the supply voltage is applied before the device actually turns on. Wait at least two seconds before beginning the commissioning.



#### CAUTION

##### Risk of accident

- Electrical components should be connected or disconnected only when the power supply cord is unplugged.

#### 4.1.1 Option with mains cut-off: OKIMAT 2 and OKIMAT 2 IPS

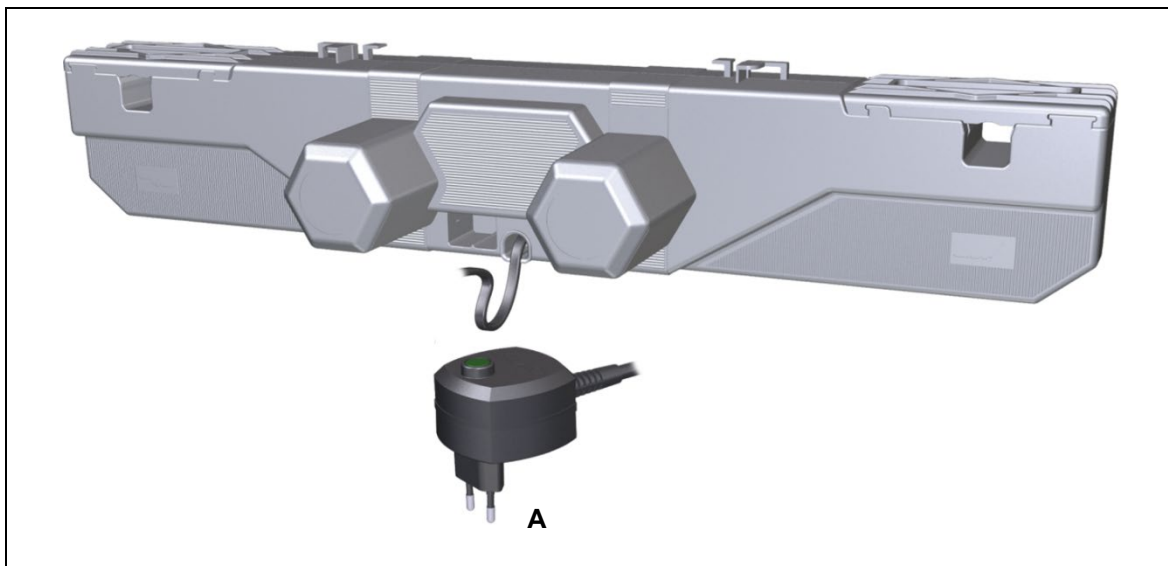


Figure 3 Variants of the mains cut-off

A Mains cut-off (EURO)

#### 4.1.2 Option with pluggable power supply cord: OKIMAT IPS

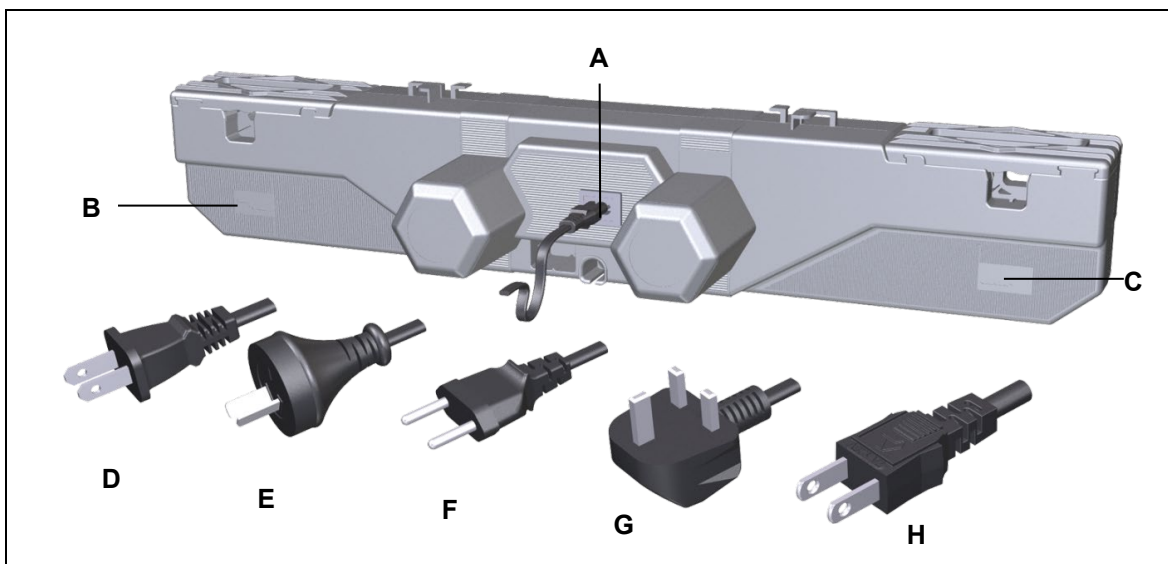


Figure 4 Variants of the pluggable power supply cord

A Power cord (C8)

B Foot side

C Head side

D Power plug (USA)

E Power plug (Australia)

F Power plug (EURO flat)

G Power plug (United Kingdom)

H Power plug (Japan)

#### 4.1.3 Option with attached power supply cord: OKIMAT IPS and OKIMAT IPS<sub>e</sub>

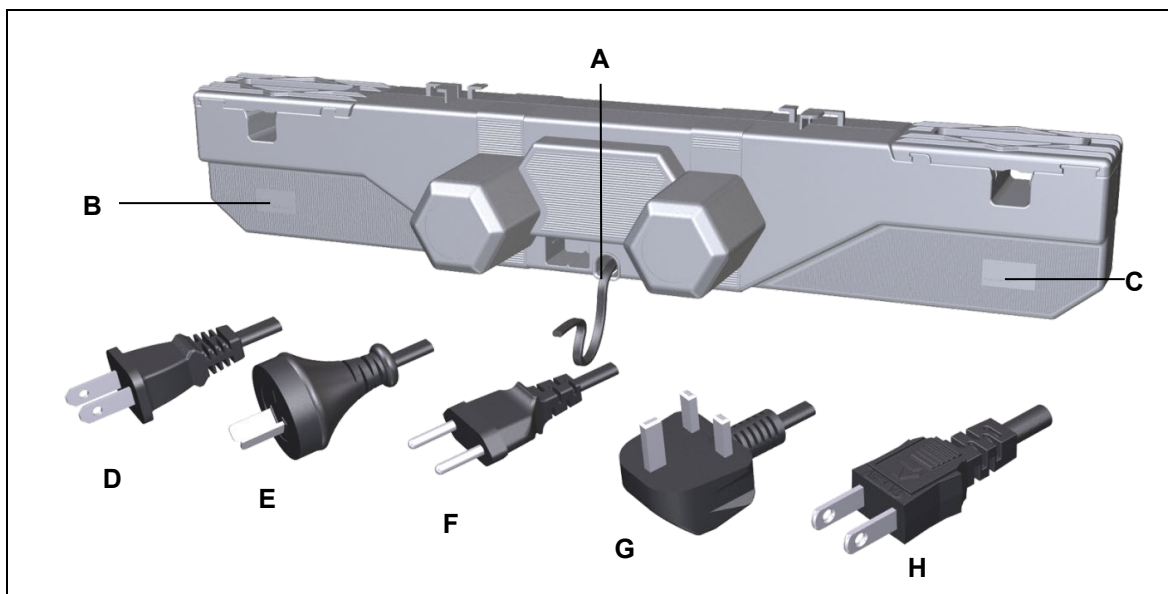


Figure 5 Variants of the attached mains power cord

- |                                      |                                 |
|--------------------------------------|---------------------------------|
| <b>A</b> Mains power socket          | <b>B</b> Foot side              |
| <b>C</b> Head side                   | <b>D</b> Power plug (USA)       |
| <b>E</b> Power plug (Australia)      | <b>F</b> Power plug (EURO flat) |
| <b>G</b> Power plug (United Kingdom) | <b>H</b> Power plug (Japan)     |

#### 4.1.4 Option with external switched-mode power supply: OKIMAT EPS

A connection on the optional external switched-mode power supply (EPS) allows you to connect the power supply (e.g. DewertOKIN power supply) using an LSP plug.

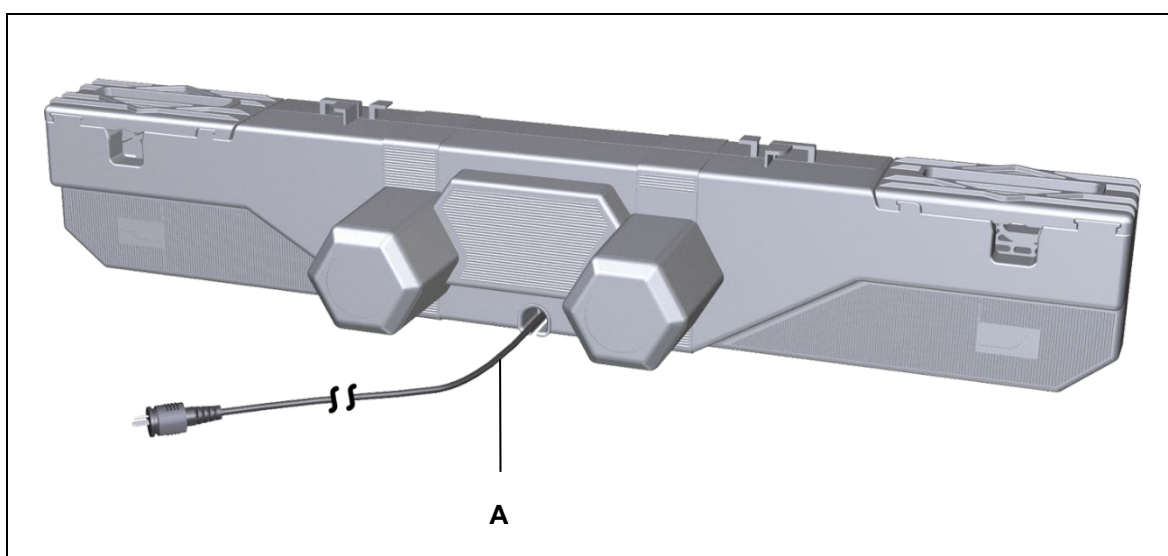


Figure 6 Variant with a connection for an external switched-mode power supply (EPS)

- A** Connecting cable (length of approx. 2000 mm) with LSP plug (e.g. DewertOKIN power supply)

## 5. Technical specifications

	OKIMAT 2	OKIMAT 2 IPS	OKIMAT IPS	OKIMAT IPSe	OKIMAT EPS
Connection to mains power (AC)/ Input voltage (DC)	230 V, 50/60 Hz	230 - 240 V, 50/60 Hz	100 - 240 V, 50/60 Hz	230 - 240 V, 50/60 Hz	24 - 29 V
Power output	max. 116 W				
Permitted push force <sup>3)</sup>	max. 6000N	max. 6000N	max. 6000N <sup>4)</sup>	max. 4500N <sup>5)</sup>	max. 6000N
Adjustment speed <sup>3</sup>	max. 3.9 mm/s	max. 4.5 mm/s	max. 4.5 mm/s	max. 5.5 mm/s	max. 4.5 mm/s
Mode of operations <sup>1</sup>	Intermittent duty 2 min./18 min.				
Protection class	II				III
Drive type	Double drive				
Protection degree	IP20				
Stroke <sup>2</sup>	87, 74, 69				
Length x width x height	708 mm x 166 mm x 120 mm				
Axle gap distance	581 mm (+/- 2 mm)				
Gap to pivot lever	min. 480 mm (+ 2mm); refer to Figure 8				
Axle support diameter	Ø 25 mm, optional Ø 34 mm	Ø 25 mm, optional Ø 34 mm	Ø 25 mm, optional Ø 34 mm	Ø 25 mm	Ø 25 mm, optional Ø 34 mm
Weight	Approx. 4.7 kg	Approx. 4.1 kg	Approx. 4.1 kg	Approx. 3.7 kg	Approx. 3.9 kg
Optional: battery-operated reset function					
Voltage <sup>6</sup>	One or two batteries				
Ambient conditions for operation, storage and transport					
Transport / storage temperature	From -20 °C to +50 °C From -4 °F to +122 °F				
Operating temperature	From +10 °C to +40 °C From +50 °F to +104 °F				
Relative humidity	From 30% to 75%				
Air pressure	From 800 hPa to 1060 hPa				
Height	< 2000 m				

1) Mode of operation: intermittent duty 2 min./18 min. This means that after the unit is operated with its rated load for up to two minutes it must then be paused for 18 minutes. The system can malfunction if this pause is not observed!

2) Other stroke distances are available on request.

3) Depending on model

4) When using the OKIMAT IPS with relay circuit.

5) When using the OKIMAT IPSe with integrated RF radio receiver: max. 5000 N.

6) Nine-volt battery (Typ 6LR61)

### Dimensions of housing

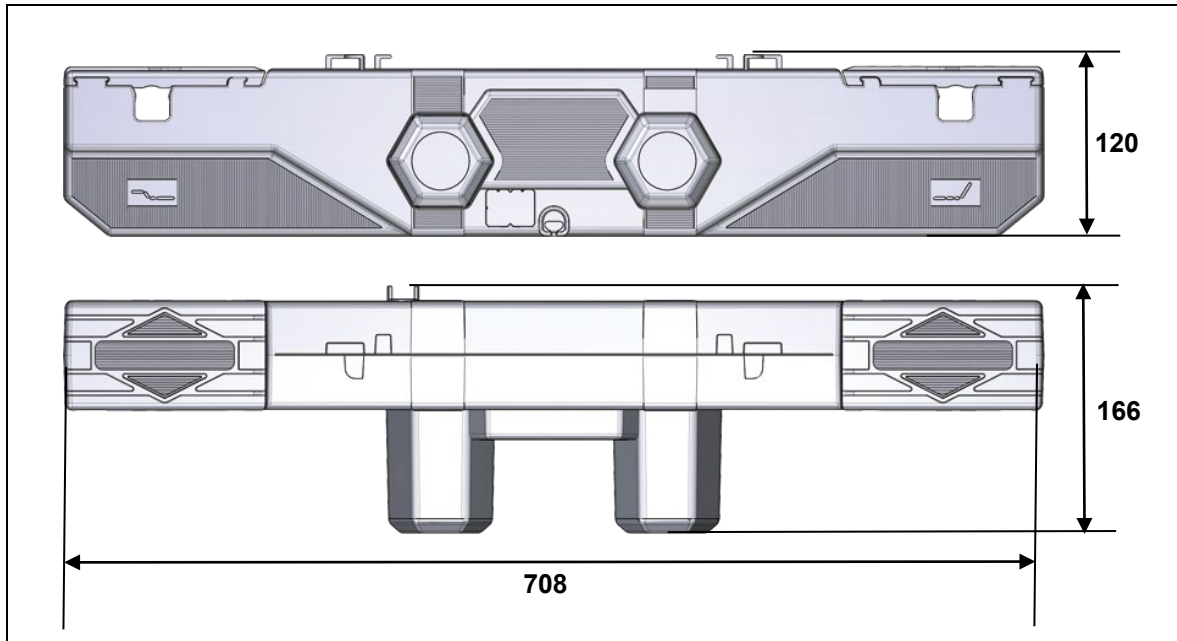


Figure 7 OKIMAT (specified in mm)

### Dimensions of the pivot lever

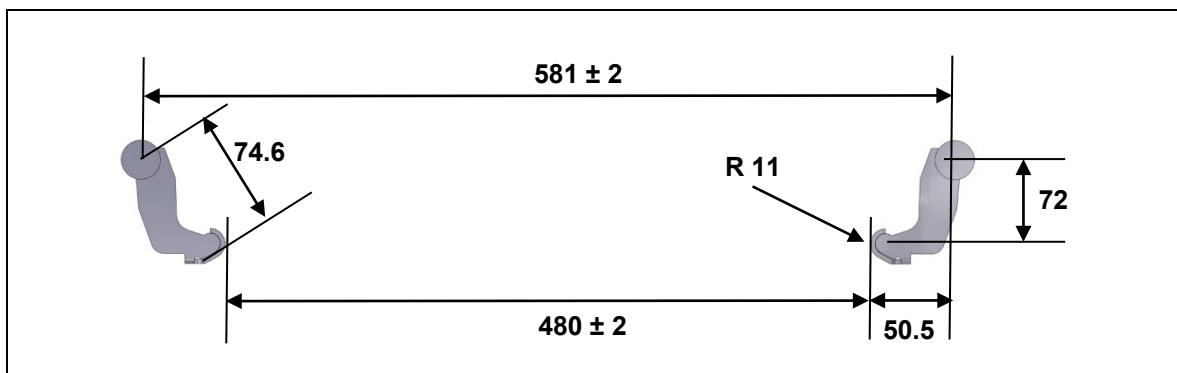


Figure 8 Pivot lever position, in mm

► Make sure that you consider the amount of torque that is generated by the drive when you design the weld between the bracket and the end product. The maximum torque is:

- OKIMAT 2: 435 Nm
- OKIMAT IPS: 435 Nm
- OKIMAT IPS<sub>e</sub>: 325 Nm
- OKIMAT 2 IPS: 435 Nm
- OKIMAT EPS: 435 Nm

► We recommend the OKIN pivot lever (ID number 2.00.718.108.00)

## 6. Installation

### 6.1 Safety notices to observe during installation

Basic safety rules must be followed in order to ensure that the end product can be continually operated in a safe manner. These rules must be observed while using the end product and while installing the drive.

#### **Avoiding fatigue fractures**

Drives that are incorrectly installed can undergo fatigue fractures which then create a risk of injury.

- Install the drive in the end product so that it is properly aligned. This will help prevent shear stress.
- Do not position the drive at a slanted angle when installing it in the end product. A slanted angle between the intended direction of movement of the end product and the drive's direction will create shear stress and could lead to a fatigue fracture.

#### **Avoiding a pinching hazard**

When designing your end product, you should take the drive adjustment movement into account with passive safety mechanisms and with the appropriate safety notices in your operating instructions.

- Installation methods for ensuring passive safety: Install the OKIMAT drive so that none of the positions where shear and pinch hazards exist are accessible externally.

Make sure that your operating instructions inform the user of these safety points.

## 6.2 Installation procedure

### 6.2.1 An example installation

Before installing the drive, make sure that you are observing all of the safety notices found in the "Safety notices to observe during installation" section.

- 1 Move your product into a position where it is supporting no load.



#### CAUTION

#### Danger of crushing injury!

- Be sure to carry out work on the drive in a position so that no loads are bearing on it. Only in this way can you be sure to avoid any risks of crushing or injury.
- Disconnect the nine-volt battery if you are using the battery-operated reset function.

- 2 Pull the shutters firmly to the side (**A**). The slots (**B**) for the brackets (**D**) are now uncovered.

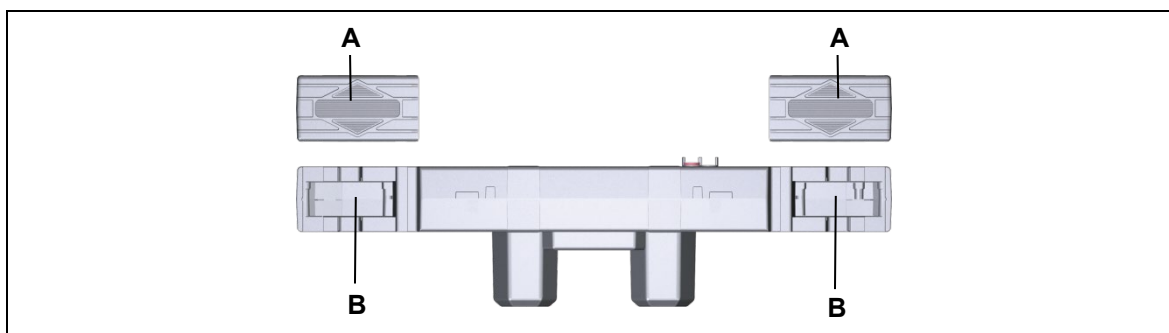


Figure 9 Installing the drive

**A** Shutters

**B** Fitting mounts

- 3 Align the OKIMAT in the proper position next to your end product. The slots for the back and leg sides must be properly aligned with the correct brackets on your end product (refer to the symbols on the OKIMAT as described in Figure 3).

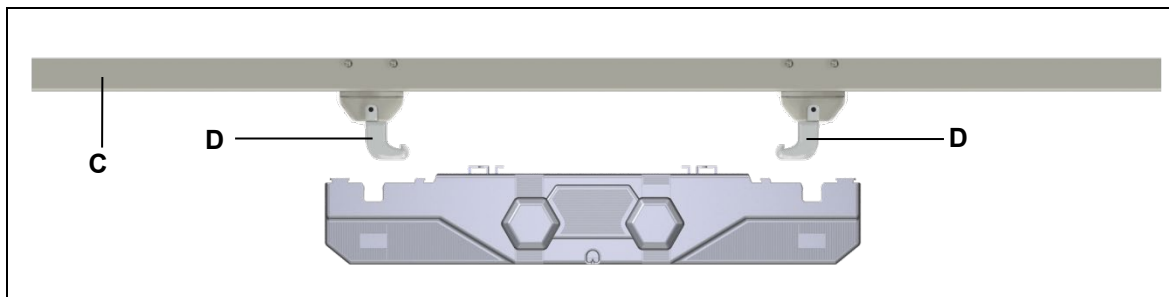


Figure 10 Installing the drive

**C** End product (bed)

**D** Brackets

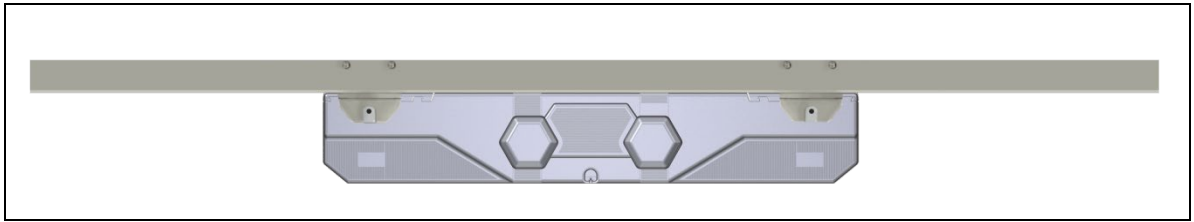


Figure 11 Installing the drive

- 4 Push the drive in so that the brackets (**D**) fit into the slots (**B**). Press in until the tubes snap into the brackets.
- 5 Close the shutters (**A**) on the drive by snapping them back in. The OKIMAT is now securely attached to the end product.
- 6 Disconnect all additional components (such as slave drives, handsets or PD12/PD13 power supply) from their sockets.
- 7 Now connect the drive to the power supply.

Please note, after the power supply has been connected:

- There is a delay after the supply voltage is applied before the device actually turns on. Wait at least two seconds before beginning the commissioning.

### Looping the handset cable through the strain relief mechanism

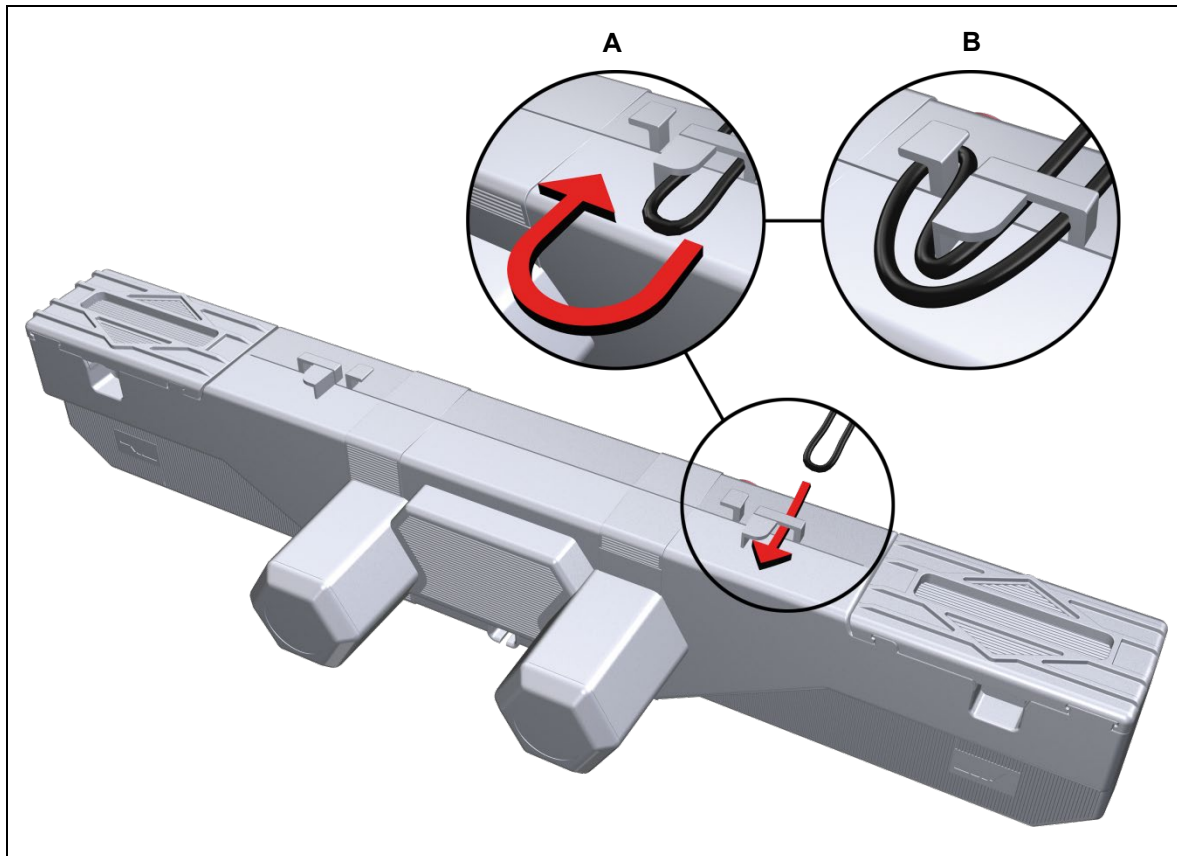


Figure 12 Looping the cable through the strain relief mechanism

**A** Looped-in handset cable

**B** Cable fastened to strain relief

- 1 Connect the plug from the handset to the handset socket on the OKIMAT.
- 2 Loop the handset cable through the strain relief catch and pull back gently on the loop as illustrated in Figure 12.

### 6.2.2 Electrical connection

**CAUTION****Risk of accident**

- Electrical components should be connected or disconnected only when the power supply cord is unplugged.
- Please note that residual electrical energy can even be present in the OKIMAT (IPS, IPS IPSE and 2) when it is unplugged.

- There is a delay after the supply voltage is applied before the device actually turns on. Wait at least two seconds before beginning the commissioning.

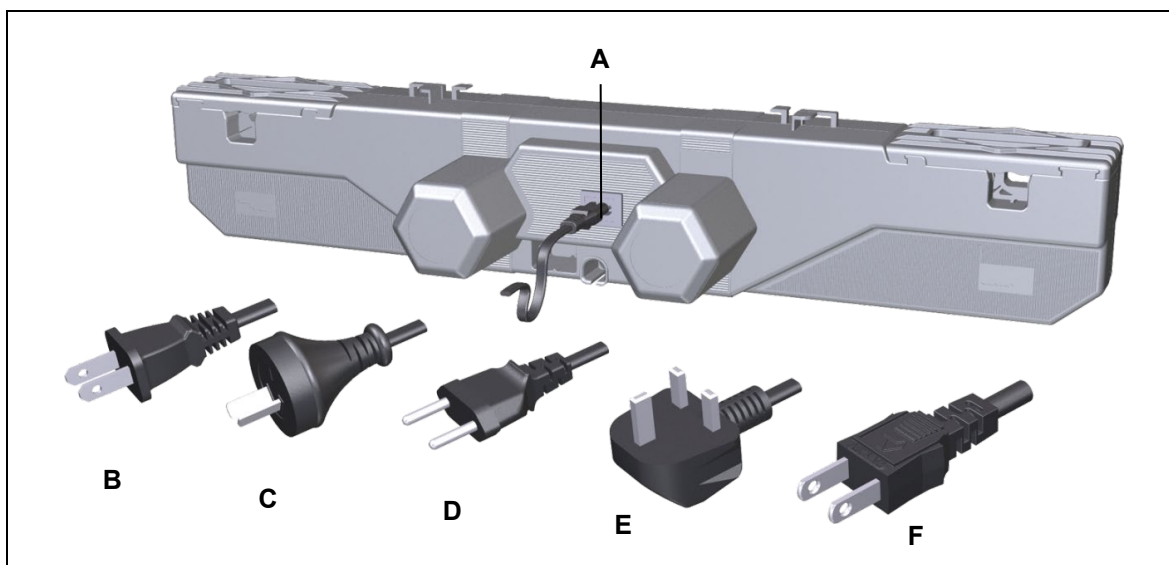
**Option with pluggable power cord: OKIMAT IPS**

Figure 13 Variants of the pluggable power cord

**A** Power plug (C8)

**C** Power plug (Australia)

**E** Power plug (United Kingdom)

**B** Power plug (USA)

**D** Power plug (EURO flat)

**F** Power plug (Japan)

**Option with attached power cord: OKIMAT2, OKIMAT IPS, OKIMAT IPS<sub>e</sub>**

Only the following personnel are qualified to work on the attached power cord, mains cut-off, or power cord:

- someone who has completed training in electronic motor assembly,
  - someone with equivalent qualifications, or
  - someone who has successfully completed the appropriate DewertOkin training program.
- You should only work on the attached power cord when you are qualified to do so. Otherwise, a properly qualified person should be found for this task.

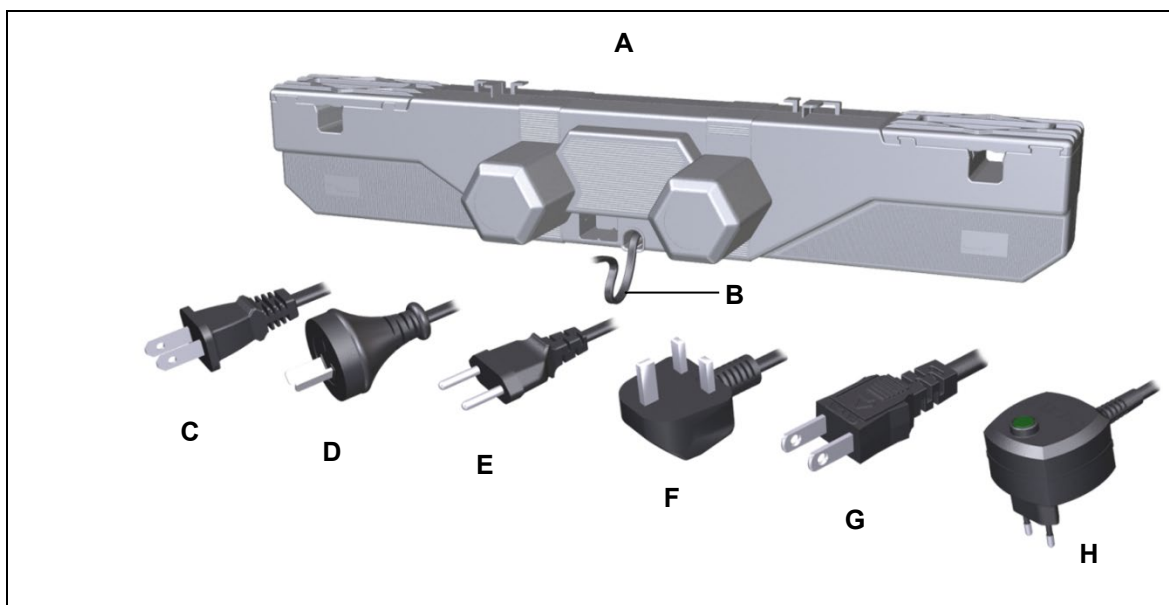


Figure 14 OKIMAT 2 (with attached power cord and mains cut-off)

- |  |                                      |
|--|--------------------------------------|
| <b>A</b> OKIMAT 2 / OKIMAT 2 IPS / OKIMAT IPS <sub>e</sub> | <b>B</b> Power cord                  |
| <b>C</b> Power plug (USA)                                  | <b>D</b> Power plug (Australia)      |
| <b>E</b> Power plug (EURO flat)                            | <b>F</b> Power plug (United Kingdom) |
| <b>G</b> Power plug (Japan)                                | <b>H</b> Mains cut-off (EURO)        |

**Option with external switched-mode power supply for the OKIMAT EPS**

The OKIMAT EPS should be connected to an external switched-mode power supply (e.g. DewertOKIN power supply with the country-specific mains plug as described in the power supply's installation instructions) using a connecting cable, as shown in Figure 15.

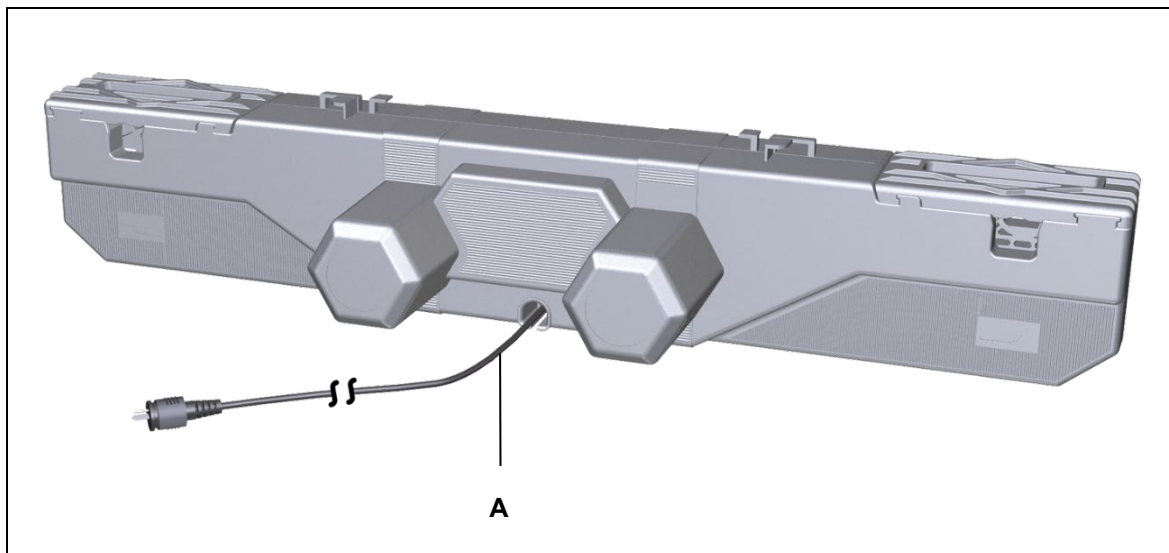


Figure 15 Connecting the OKIMAT EPS to an external switched-mode EPS power supply

**A** Connecting cable for Switched-mode  
DewertOKIN power supply

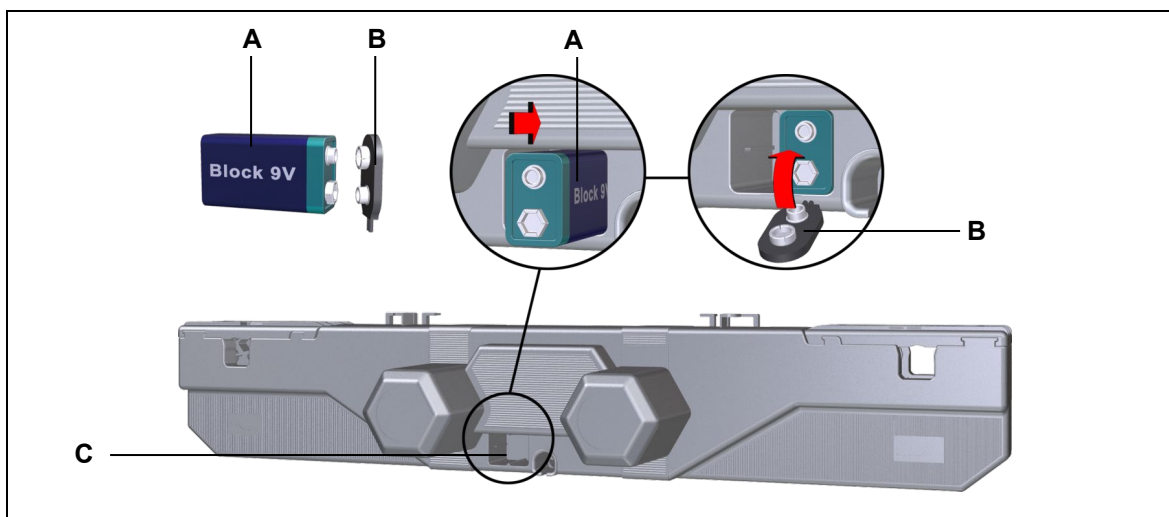
**Optional: battery-operated reset function****Connecting the nine-volt battery**

Figure 16 Connecting the nine-volt battery

**A** 9-V battery (type 6LR61)

**B** Battery clip

**C** Battery compartment

**NOTICE**

For the RF radio variants, the nine-volt battery may discharge whenever the mains voltage is not connected.

- DewertOkin recommends that you disconnect the nine-volt battery whenever the mains voltage is disconnected.

**Routing the electrical cables**

When routing the cables, be sure that:

- the cables cannot get jammed,
- no mechanical load (such as pulling, pushing or bending) will be put on the cables, and
- the cables cannot be damaged in any way.

Fasten all cables (especially the mains cable) to the end product using sufficient strain relief and kink prevention methods. Be sure that the design of the end product prevents the mains cable from coming into contact with the floor during transport.

**6.2.3 Dismantling**



**CAUTION**

**Risk of accident**

- Work on electrical components should be conducted only when the mains power connection is unplugged.
- Disconnect the nine-volt battery if you are using the battery-operated reset function.

- Certain details may change because of technical changes.



Figure 17 Removing the drive

- 1 Move your product into a position where it is supporting no load.



**CAUTION**

**Danger of crushing injury!**

Be sure to carry out work on the drive in a position so that no loads are bearing on it. Only in this way can you be sure to avoid any risks of crushing or injury.

- 2 Disconnect the OKIMAT from the power supply!

- 3 Disconnect all additional components such as slave drives or handset from their sockets.  
► Be sure to support the drive's weight to prevent it from falling.
- 4 Pull strongly on the shutters (A) sideways until they are completely out.

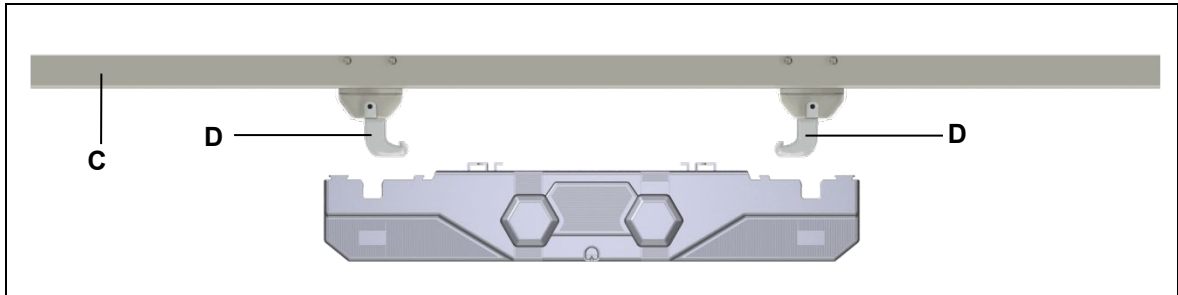


Figure 18 Removing the drive

C End product (bed)

D Brackets

- 5 Pull out the OKIMAT far enough so that the brackets (D) are out of the slots (B). The OKIMAT is now unattached and can be removed.

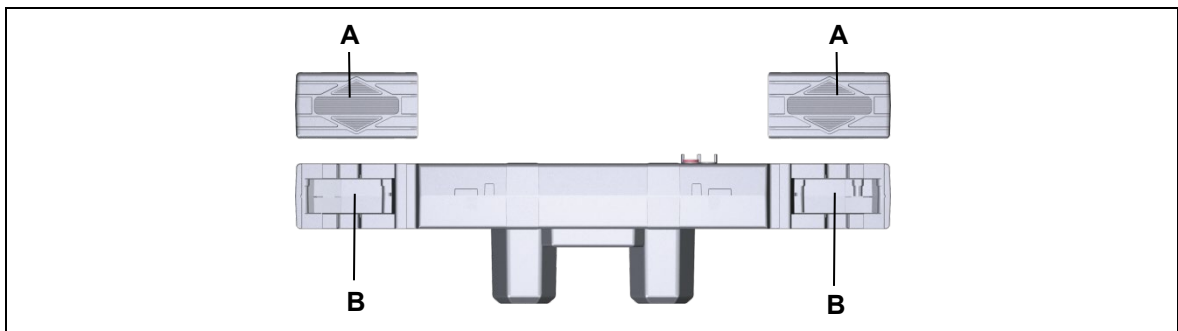


Figure 19 Removing the drive

A Shutters

B Fitting mounts

- 6 Push the shutters (A) back onto the OKIMAT 6 so that they are not lost during transportation.

## 7. Information about creating your Operating Manual

The factual information contained within may be used when you are creating the end-product manual. The installation instructions do not contain all information required for the safe operation of the end product. They only describe the installation and operation of the drive as a partially assembled piece of machinery.

- ▶ When creating the operating instructions, remember that the installation instructions are intended for qualified specialists and are not for typical users of the end product.

### 7.1 General information

- ▶ Only a DewertOkin device should be used to control the drive since they have already been verified to work together.

#### Delayed start-up

After plugging the power plug into the power outlet:

- ▶ There is a delay after the supply voltage is applied before the device actually turns on. Wait at least two seconds before beginning the commissioning.

#### Power-on time / intermittent operations

The OKIMAT drive has been designed for intermittent operations. Intermittent operation is an operational mode where the drive must pause after a specified maximum period of operation (power-on time). This protects the drive from overheating. Extreme overheating can cause a malfunction.

- ▶ The ratings plate on the drive specifies the maximum power-on time and the required pause intervals.

#### Avoiding toggle operations

You should avoid switching from one direction of travel to the opposite direction without first stopping the motor. Make sure that you pause between motions! A pause (motor stop time) can be activated using the controls.

<b>NOTICE</b>
You should always avoid a quick change (toggling) of directions.

#### Shutting off the drive

To shut off the drive, first disconnect the system from the power supply and then disconnect the battery. The power supply must always be accessible during operations so that the system can be shut off.

## 7.2 Handset / hand-held remote control

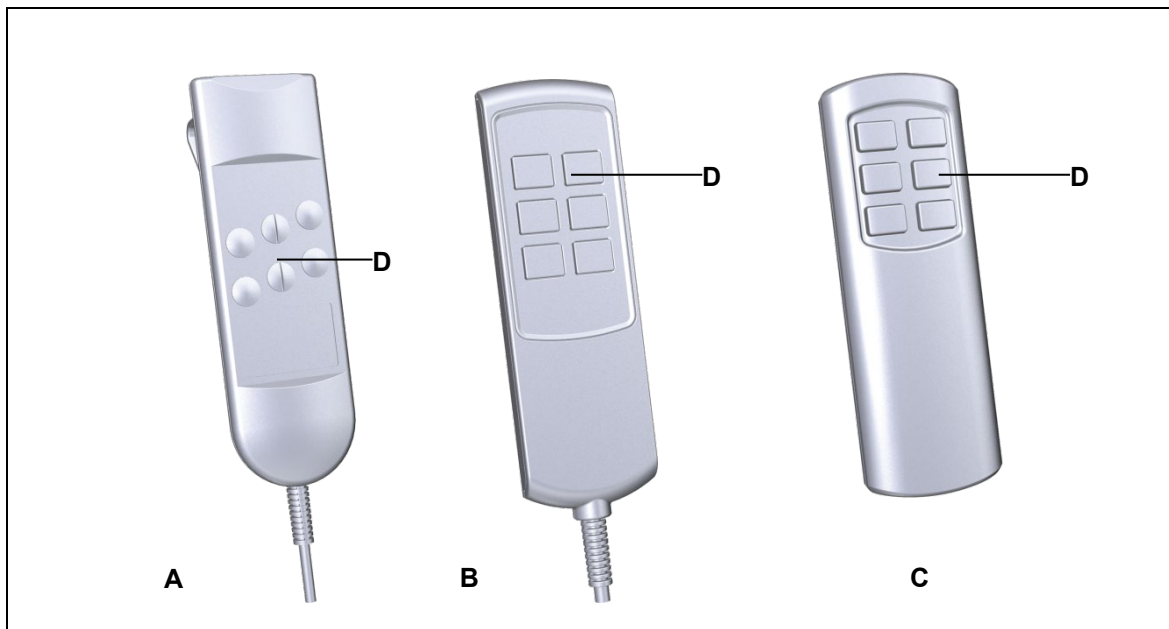


Figure 20 Examples of handset / hand-held remote control

- |  |                          |
|--|--------------------------|
| <b>A</b> Baseline handset  | <b>B</b> Topline handset |
| <b>C</b> RF Eco hand-held remote control, for built-in radio receiver (RF) | <b>D</b> Adjustment keys |

- The adjustment motions are carried out by pressing on the corresponding symbol keys on the handset/hand-held remote control.

### 7.2.1 Programming the RF Eco hand-held remote

► Only for the model with integrated RF receiver.

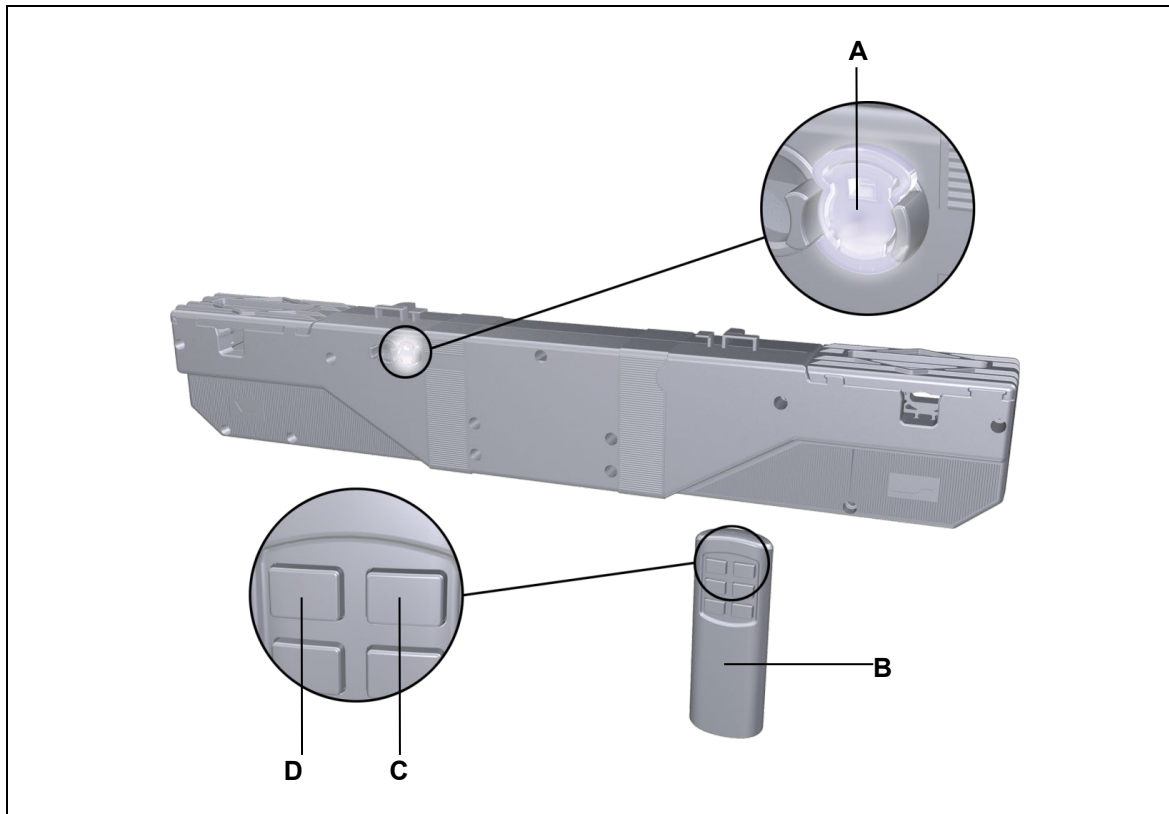


Figure 21 Programming the RF Eco hand-held remote

**A** Function key (at rear of the drive)

**B** RF Eco hand-held remote

- 1 Press the function key on the drive (**A** in Figure 21) twice (a quick double click). The drive will now be in the teach-in (programming) mode for approximately 10 seconds. The LED on the function key lights up.
- 2 Press the (**C**) and (**D**) keys simultaneously on the RF Eco hand-held remote. Hold down both keys until the function key's LED starts to blink. The RF Eco remote is now programmed and ready to use.

### 7.2.2 Deactivating the RF Eco hand-held remote

You can interrupt communications between the hand-held remote and the drive; this is useful if you wish to decommission the remote or if the programming for the remote was unsuccessful. Take the following steps:

- 1 Press the function key on the drive (**A** in Figure 21) four times quickly.
- 2 Then press the function key (**A**) one more time. The RF Eco remote is now deactivated.

## 7.3 Notice for operating with optional configuration

### 7.3.1 Optional: battery-operated reset function

The battery-operated reset function allows the drive system to be operated during a power outage. A nine-volt battery is used to power the OKIMAT in the event of an outage. The battery is not connected by default since it has very limited capacity. It can only be used once to power the reset function. The used batteries should then be replaced and properly disposed of.

<b>NOTICE</b>
The battery-operated reset function is not a safety system and does not avert danger.

When working with radio units (RF), first disconnect the drive system from the power supply! Connect the nine-volt battery first when you would like to perform a battery-operated reset. The battery may only be used to power the reset function one time. Take out the battery and dispose of it properly after the reset function has been carried out.

- If the end product is under a heavy load which prevents the reset function from operating, the strain or load on the end product must first be removed before a reset can be carried out.

### 7.3.2 Additional operating controls

For more information on operating other controls, refer to the separate instructions for these controllers.

### 7.3.3 Optional: mains cut-off mechanism

For more information on operating other controls, refer to the separate instructions for these controllers.

The mains cut-off mechanism is responsible for isolating the drive automatically from the mains power supply when the drive is not moving. A switching component is used to isolate both poles of the power transformer from the mains power supply.

The mains cut-off mechanism allows power to the drive only after a button has been pressed on the handset to trigger drive motion.

- Do not use the integrated mains cut-off if you already use an in-house mains cut-off system.

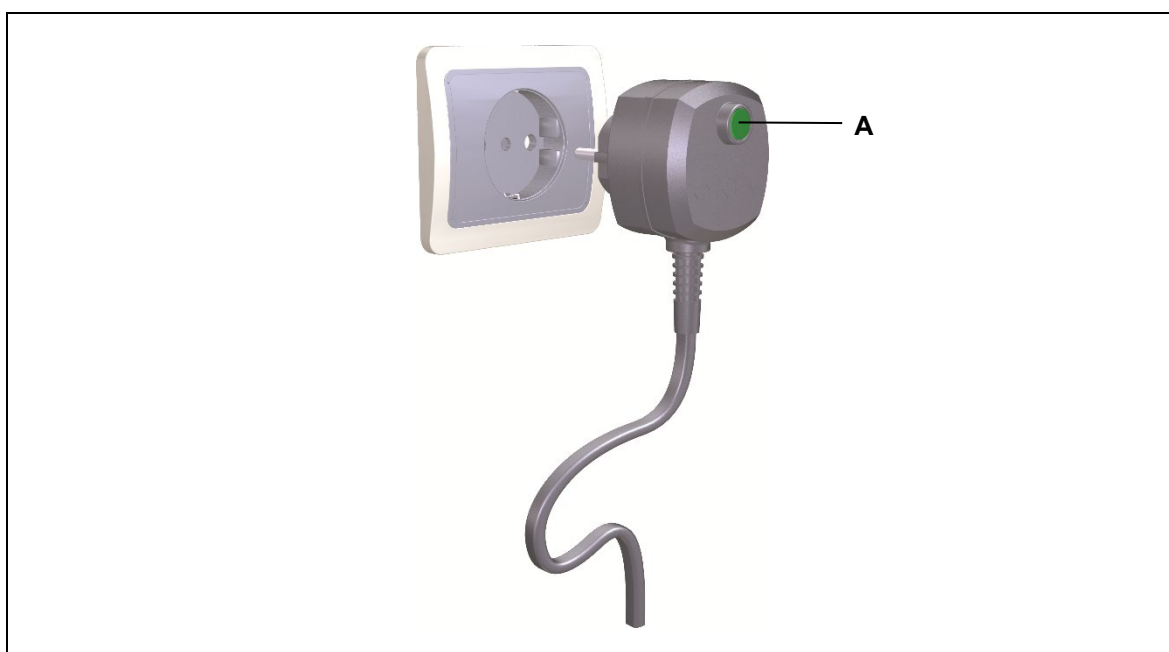


Figure 22 Mains plug with mains cut-off

**A** Key: Charge switching capacitor



#### CAUTION

The mains cut-off is not a "central command device" in the sense used by the DIN VDE regulations. You should first completely disconnect the voltage supply from the drive system before conducting any type of work on a DewertOkin product which features a mains cut-off. First pull out the power plug. This guarantees that the system is safely shut off in compliance with the German DIN VDE 0105 and DGUV/regulation 3.

Note on operating the mains cut-off:

- To restore the connection to the mains, press a handset button to adjust the position of the drive.
- If this adjustment motion is not required, insert the mains cut-off plug into the socket. Then press the button on the mains cut-off plug. This charges up a switching capacitor and, when the button is pressed again on the handset, releases the mains connection for the adjustment movement.

## 8. Troubleshooting

This chapter describes troubleshooting methods for fixing problems. If you experience an error that is not listed in this table, please contact your supplier.

- Only qualified specialists who have received electrician training should carry out troubleshooting and repairs.

Problem	Possible cause	Solution
The handset or drive system is not functioning.	There is no mains supply voltage.	Connect the mains power.
	The hand switch or drive system is defective.	Please contact your supplier or sales agent.
	The switching capacitor in the mains cut-off is empty	Press the button on the mains cut-off plug after it has been plugged into the power supply.
The drive is suddenly no longer capable of movement.	The overheating protection or system protection has been triggered.	Remove the overload (change or remove the load). Allow the system to rest for 20 to 30 minutes with the mains power unplugged. If this does not resolve the problem, contact your supplier or distributor.
	The unit's fuse may have been triggered or may be broken.	Please contact your supplier or sales agent.
	There is no mains supply voltage.	Connect the mains power.
	A lead-in connection has been interrupted (mains power, hand switch or auxiliary drive).	Check the lead-in connections and re-seat the contacts if required.
The battery-operated reset is not functioning.	The battery is empty.	Check the battery and replace if necessary.
	Battery is not connected.	Connect the battery.

## 9. Maintenance

### 9.1 Maintenance

- ▶ The OKIMAT drive requires no maintenance.

### 9.2 Cleaning and care

- ▶ Clean the OKIMAT drive as needed using a dry, antistatic cloth.

<b>NOTICE</b>
<ul style="list-style-type: none"><li>• Always disconnect the power supply before you start to clean the drive system!</li><li>• Disconnect the nine-volt battery if you are using the battery-operated reset function.</li><li>• Never clean the OKIMAT in an automated washing system or with a high-pressure cleaner. Do not allow fluids to penetrate the unit. Damage to the system could result.</li><li>• Do not use a cleanser that contains benzene, alcohol or similar solvents.</li><li>• Make sure that you do not damage the drive's connecting cable.</li></ul>

## 10. Disposal

### 10.1 Packaging material

The packaging material should be sorted into recyclable components and then disposed of in accordance with the appropriate national environmental regulations (in Germany according to the recycling law KrWG from 01.06.2012; internationally according to the EU Directive 2008/98/EC (Waste Framework Directive WFD as of 12.12.2008)).

### 10.2 Drive components

The OKIMAT drive consists of electronic components, cables and metal and plastic parts. You should observe all corresponding national and regional environmental regulations when disposing of the OKIMAT drive.

The disposal of the end product is regulated in Germany by Elektro-G, internationally by the EU Directive 2012/19/EC (WEEE), or by any applicable national laws and regulations.



The OKIMAT drive should not be disposed of with normal household waste!

The disposal of the nine-volt batteries is regulated in the EU by Battery Directive 2006/66/EC, in Germany by the BattG battery law of 25.6.2009, and internationally by any applicable national laws and regulations.



The battery should not be disposed of with normal household waste!

## Einbauerklärung

nach Anhang II der EU-Maschinenrichtlinie  
2006/42/EG

Der Hersteller

## Declaration of Incorporation

According to Appendix II of the EU Machinery  
Directive 2006/42/EC

The manufacturer:

DewertOkin GmbH  
Weststraße 1  
32278 Kirchlengern  
Deutschland - Germany

erklärt hiermit, dass nachstehend beschriebene  
unvollständigen Maschinen

*declares that the incomplete machines described  
below*

**OKIMAT 2**  
**OKIMAT 2 IPS**  
**OKIMAT IPS**  
**OKIMAT IPSe**  
**OKIMAT EPS**

die folgenden grundlegenden Anforderungen der  
Richtlinie Maschinen (2006/42/EG) erfüllt:

*complies with the following basic requirements of the  
Machinery Directive (2006/42/EC):*

Abschnitt:

*Sections:*

1.1.3; 1.3.3; 1.3.4; 1.3.7; 1.5.1; 1.5.2; 1.5.5; 1.5.6; 1.5.7; 1.5.8; 1.5.9; 1.5.10; 1.5.13

Die unvollständige Maschine darf erst dann in Betrieb  
genommen werden, wenn festgestellt wurde, dass  
die Maschine, in die die unvollständige Maschine ein-  
gebaut werden soll, den Bestimmungen der Richtlinie  
Maschinen (2006/42/EG) entspricht.

*You may only operate this incomplete machine after  
you have confirmed that the end product (into which  
this machine will be installed) complies with the  
Machinery Directive 2006/42/EC.*

Der Hersteller verpflichtet sich, die speziellen Unter-  
lagen zur unvollständigen Maschine einzelstaatlichen  
Stellen auf Verlangen elektronisch zu übermitteln. Die  
zur Maschine gehörenden speziellen technischen  
Unterlagen nach Anhang VII Teil B wurden erstellt.

*On request, the manufacturer is obliged to send the  
special documentation accompanying the partially  
completed machinery in electronic form to the  
appropriate national institution. The special technical  
documents corresponding to the machine have been  
created according to Appendix VII, part B.*

Für die Zusammenstellung der technischen Unter-  
lagen ist bevollmächtigt: DewertOkin GmbH  
Weststraße 1  
32278 Kirchlengern  
Tel.: 05223 979-0  
Deutschland - Germany

*For preparation of the technical documentation is  
authorized: DewertOkin GmbH  
Weststraße 1  
32278 Kirchlengern  
Phone: +49 5223 979-0  
Deutschland - Germany*



Kirchlengern, Germany 11 May 2020

Dr.-Ing. Josef G. Groß  
Geschäftsführer / Managing Director

## EG-Konformitätserklärung

Nach Anhang IV der EMV-Richtlinie 2014/30/EU

Nach Anhang IV der EU-Niederspannungsrichtlinie 2014/35/EU

Nach Anhang VI der RoHS-Richtlinie 2011/65/EU (inkl. Delegierte Richtlinie (EU) 2015/863)

Der Hersteller

## EU Declaration of Conformity

*In compliance with Appendix IV of the EMC-Directive 2014/30/EU*

*In compliance with Appendix IV of the LVD-Directive 2014/35/EU*

*In compliance with Appendix VI of the EU RoHS Directive 2011/65/EU (incl. Commission delegated Directive (EU) 2015/863)*

*The manufacturer*

DewertOkin GmbH  
Weststraße 1  
32278 Kirchlegern  
Deutschland - Germany

erklärt hiermit, dass das Produkt

*declares that the following product*

**OKIMAT 2**  
**OKIMAT 2 IPS**  
**OKIMAT IPS**  
**OKIMAT IPSe**  
**OKIMAT EPS**

die Anforderungen folgender EG-Richtlinien erfüllt:

*meets the requirements of the following EU directives:*

**Richtlinie über elektromagnetische Verträglichkeit 2014/30/EU**

**Electromagnetic Compatibility Directive 2014/30/EU**

**Niederspannungsrichtlinie 2014/35/EU**

**Low Voltage Directive 2014/35/EU**

**DELEGIERTE RICHTLINIE (EU) 2015/863 DER KOMMISSION vom 31. März 2015 zur Änderung von Anhang II der Richtlinie 2011/65/EU des Europäischen Parlaments und des Rates hinsichtlich der Liste der Stoffe, die Beschränkungen unterliegen.**

**COMMISSION DELEGATED DIRECTIVE (EU) 2015/863 of 31 March 2015 amending Annex II to Directive 2011/65/EU of the European Parliament and of the Council as regards the list of restricted substances.**

Angewendete Normen

*Applied standards:*

- EN 60335-1:2012/A11:2014
- EN 55014-1:2006/A1:2009/A2:2011
- EN 55014-2:1997/A1:2001/A2:2008
- EN 61000-3-2:2014
- EN 61000-3-3:2013
- EN 62233:2008

Konstruktive Änderungen, die Auswirkungen auf die in der Montageanleitung angegebenen technischen Daten und den bestimmungsgemäßen Gebrauch haben, das Produkt also wesentlich verändern, machen diese Konformitätserklärung ungültig!

*This declaration of conformity is no longer valid if constructional changes are made which significantly change the drive system (i.e., which influence the technical specifications found in the instructions or the intended use)!*



Kirchlegern, Germany 11 May 2020

Dr.-Ing. Josef G. Groß  
Geschäftsführer / Managing Director

## **EG-Konformitätserklärung**

(Ausführung 2,4GHz)

Nach Anhang VI der RED-Richtlinie 2014/53/EU

Nach Anhang VI der RoHS-Richtlinie 2011/65/EU

(inkl. Delegierte Richtlinie (EU) 2015/863)

Der Hersteller

## **EU Declaration of Conformity**

(Version 2.4GHz)

*In compliance with Appendix VI of the RED-Directive 2014/53/EU*

*In compliance with Appendix VI of the EU RoHS Directive 2011/65/EU*

*(incl. Commission delegated Directive (EU) 2015/863)*

*The manufacturer:*

DewertOkin GmbH  
Weststraße 1  
32278 Kirchlegern  
Deutschland - Germany

erklärt hiermit, dass das Produkt

*declares that the following product*

**OKIMAT IPS**  
**OKIMAT IPSe**  
**OKIMAT EPSe**

die Anforderungen folgender EG-Richtlinien erfüllt:

*meets the requirements of the following EU directives:*

**Richtlinie 2014/53 über die Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die Bereitstellung von Funkanlagen auf dem Markt**

***RED Directive 2014/53/EU***

**DELEGIERTE RICHTLINIE (EU) 2015/863 DER KOMMISSION vom 31. März 2015 zur Änderung von Anhang II der Richtlinie 2011/65/EU des Europäischen Parlaments und des Rates hinsichtlich der Liste der Stoffe, die Beschränkungen unterliegen.**

***COMMISSION DELEGATED DIRECTIVE (EU) 2015/863 of 31 March 2015 amending Annex II to Directive 2011/65/EU of the European Parliament and of the Council as regards the list of restricted substances.***

Angewendete Normen

*Applied standards:*

- EN 60335-1:2012/A11:2014
- EN 55014-1:2006/A1:2009/A2:2011
- EN 55014-2:1997/A1:2001/A2:2008
- EN 61000-3-2:2014
- EN 61000-3-3:2013
- EN 62233:2008
- EN 50663: 2017
- ETSI EN 300440 V2.1.1
- ETSI EN 301489-1 V1.9.2

Konstruktive Änderungen, die Auswirkungen auf die in der Montageanleitung angegebenen technischen Daten und den bestimmungsgemäßen Gebrauch haben, das Produkt also wesentlich verändern, machen diese Konformitätserklärung ungültig!

*This declaration of conformity is no longer valid if constructional changes are made which significantly change the drive system (i.e., which influence the technical specifications found in the instructions or the intended use)!*



Kirchlegern, Germany 11 May 2020

Dr.-Ing. Josef G. Groß  
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