



Umluftheizung / Aircirculation Heater
Luftsirkulasjonsvarmeapparat / Värmefläkt

Palma 2.0



EN : This product is only suitable for well insulated rooms or occasional use.

DE : Dieses Produkt ist nur für gut isolierte Bereiche oder gelegentliche Verwendung geeignet. **FR** : Ce produit convient uniquement à des endroits bien isolés ou pour un usage occasionnel. **IT** : Questo prodotto è adatto solo per spazi ben isolati o per uso occasionale. **NL** : Dit product is uitsluitend geschikt voor goed geïsoleerde ruimten of voor sporadisch gebruik. **NO** : Dette produktet egner seg kun for godt isolerte rom eller sporadisk bruk. **SV** : Denna produkt är endast lämplig för användning i väl isolerade utrymmen eller enstaka användning.



Introduction

This manual is intended for the Palma 2.0 RAW and Palma 2.0. The Palma 2.0 RAW consists of an air circulation heater. The Palma 2.0 consists of the air circulation heater and a wet room thermostat Thermo. The electric air circulation heater Palma 2.0 and Palma 2.0 RAW serves to control the temperature of greenhouses and conservatories.

Read and observe the directions in these instructions and the general safety and hazard notes carefully before installation. Keep this leaflet in a safe place for future reference. If you doubt the safety of this device please seek advice from a specialist. If using the device in a greenhouse please ensure that the electrical connections are installed by qualified staff.

1 Technical data

1.1 Scope of delivery

Palma 2.0-Digital:

- Air circulation heater Palma 2.0
- 1 Digital-Thermostat "Thermo 2"

Palma 2.0- Manuell:

- Air circulation heater Palma 2.0

Thermo 2	
Device type	Digital-Thermostat
Power supply	230 V/50-60 Hz
Max. breaking capacity	3000 W
Max. switching current	16 A
Control range:	-50 bis +99 °C
Distinction rate	± 1 °C
Input	< 1,5 W
Protection class	II
Protective system	IP X4
Sensor length:	approx. 2,5 m

Palma 2.0	
Device type	Air circulation heater
Power supply	230 V/50-60 Hz
Maximum performance	2025 W
Maximum power consumption	9,0 A
Control range	0 bis 85 °C
Controller tolerance:	± 5 °C
Input	< 1,5 W
Protection class	I
Protective system	IP X4
Abmessungen	280 x 195 x 315 mm

1.2 Main component parts

Palma 2.0-Digital (1)

1. Air intake opening
2. Air output opening
3. Thermostat switch
4. Selector switch
5. Operation lamp

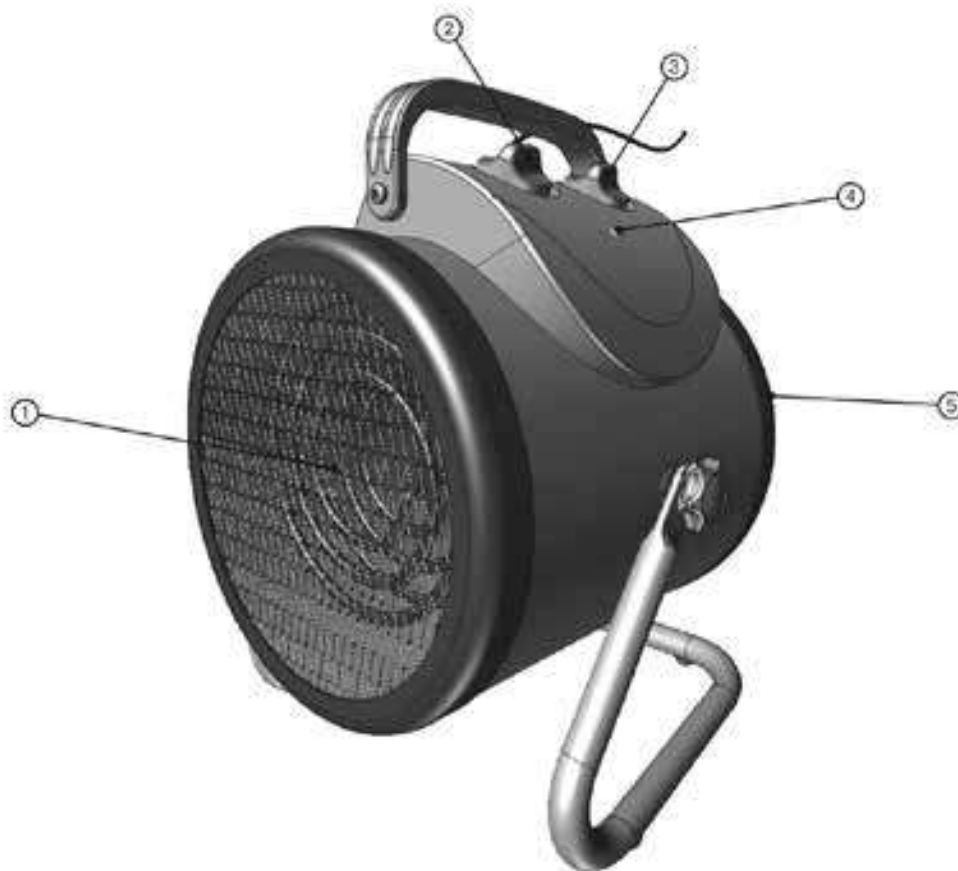


Image 1

"Thermo 2" (2) (optional)

1. Socket of the Thermo 2
2. Display
3. On/off button
4. Button up
5. Button down

6. Thermometer
7. 2x Mounting holes
8. On/off indication lamp
9. Heating / cooling mode

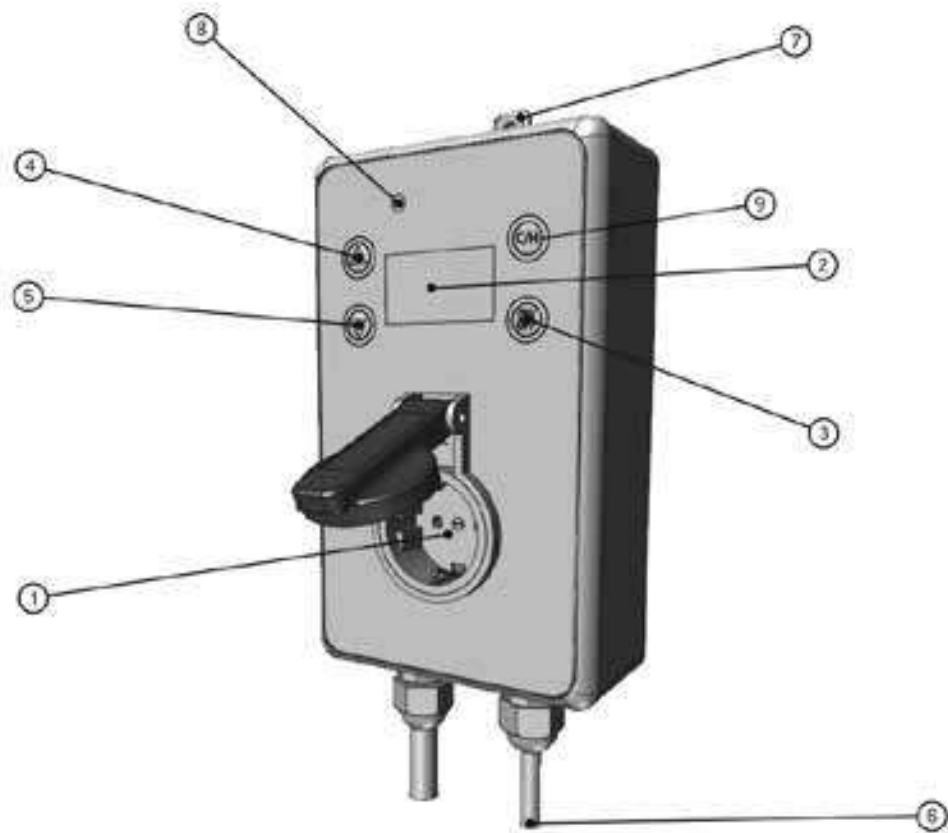


Image 2

2. Preventive measures and safety instructions

2.1 Warning! A warning indicates the risk of damage to the user or the product if the user does not carry out the procedures with care. Please note! A comment makes the user aware of possible problems. Tip: A tip makes the user aware of convenient functions and additional options.

2.2 Safety and hazard notes

Warning! This device is only approved for connection to 230 V ~ / 50-60 Hz AC Voltage. It must be protected from heavy soiling and moisture. Different uses to those described above can lead to damage to the device, e.g. short circuit, electric shock etc. Always follow the safety and installation instructions.

Warning! The only permitted power source is a 230 V ~, 50/60 Hz mains network socket. Never try to operate the device using a different voltage.

Warning! Only use this device indoors.

Warning! The device must be disconnected from the mains supply when opening the cover or removing parts.

Warning! Never insert or remove the power plug with wet hands.

Warning! Never pull the power cord itself; only remove the plug from the socket holding the grips on the mains plug.

Warning! Do not store or use inflammable materials or spray near the device.

Warning! Do not use the device in an easily inflammable atmosphere (e.g. close to fuel gas or spray bottles).

Warning! Do not cover the heater.

Warning! Never install the device close to taps, wash basins or other water sources. Also never connect your heater to a power source if the surface of the heater is damp.

Warning! Do not insert any objects into the openings on the device as this risks injury, electric shock or damage to the device.

Warning! The casing heats up during operation. Install the in such a way that accidental contact is avoided. The device only cools slowly after it is switched off. Only transport it using the carrying handle that is designed for this purpose.

Warning! Never dry inflammable objects in front of the discharge openings.

Warning! During assembly please ensure that the connecting cable is not crushed or damaged by sharp edges. If open points have been created by this kind of damage then the device may not be reconnected to the supply network for any reason.

Warning! Always remove the plug from the socket before cleaning the device. Only clean using a damp (not wet) cloth.

Warning! Always remove the plug from the mains if the device is taken out of service for a longer period. Store the heater in a dry, protected place for this period.

Warning! If it can be assumed that safe operation is no longer possible then the device must be taken out of operation and secured against accidental operation. This is the case:

- if the device or the mains cable display visible damage;
- if the device no longer works;
- after a long period of storage under unfavorable conditions;
- following severe transport stress

Warning! Keep the product out of reach of children.

Warning! The device is not suitable for use in cattle breeding areas.

Warning! These operating instructions form a constituent part of the device and should be kept in a safe place. If the device is passed on to a third party then these instructions should be passed on with it.

Warning! Never submerge the device in water.

Warning! The guarantee is not valid if the repairs are not carried out correctly.

Warning! In commercial premises the accident prevention regulations of the employers liability insurance association for electrical equipment and facilities must be observed.

Warning! Never pour liquids over the device. In the event that this happens remove the plug from the socket and consult a specialist.

Please note! This device is not designed for use by persons (including children) who have limited physical, sensory or mental capabilities and also not by persons with insufficient experience or knowledge of handling this product except where they are monitored or instructed by a person who is responsible for their safety.

Please note! After unpacking the device and before initial operation please ensure that the device and all the relevant accessories are in good working order. If transport damage is ascertained then please contact the corresponding distributor or manufacturer immediately.

Please note! Consult a specialist if you have any doubts regarding the functioning, safety or connection of the device.

3. Installation

Warning! Do not leave the packaging materials (plastic bags, polystyrene, nails etc.) within reach of children as they represent potential hazards.

Warning! Electrical devices may only be operated in wet rooms connected to a residual current circuit breaker.

Warning! Before initial operation of the device please ensure that this connection is provided at the planned connection location.

Warning! The installation location must be selected so that the devices cannot be sprayed with water or fall into water in any event.

Please note! Lay the connection cables in such a way that nobody can trip over them and they cannot be crushed or come into contact with hot objects.

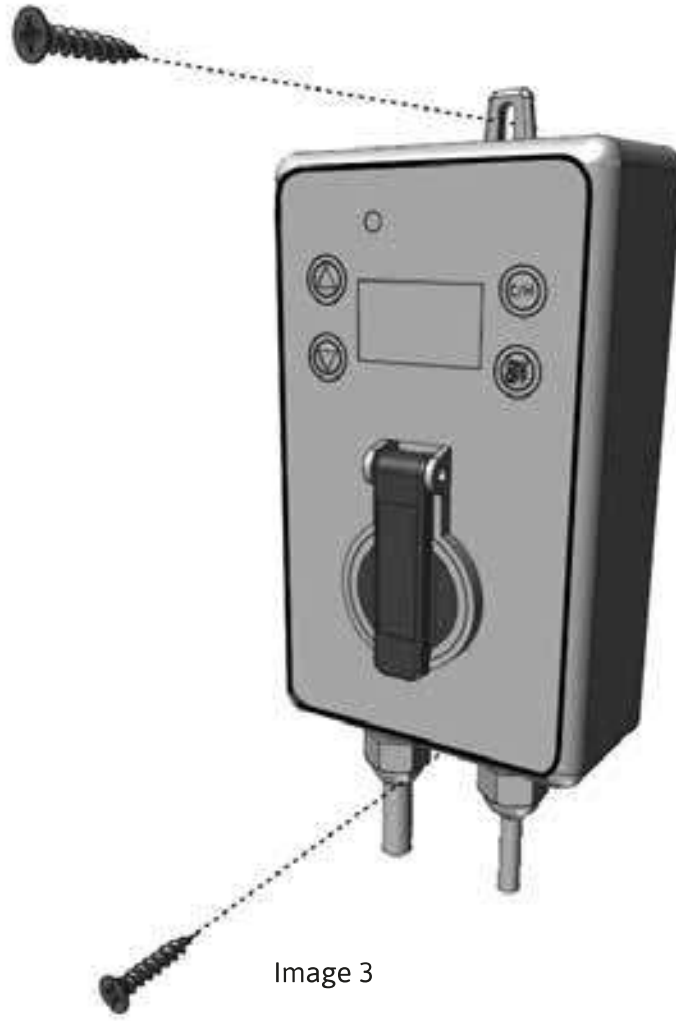
Please note! Only use extension cables that are compatible with the output and in accordance with the valid safety regulations for the device.

Please note! Make sure that the devices are disconnected from the mains power before and during installation.

When using the Palma 2.0 heater you have the choice of operation with or without the included wet room thermostat Thermo 2. However for exact temperature regulation and energy-saving operation we urgently recommend using the Thermo 2.

To install the Palma 2.0, go to section 3.1.

To install the Palma 2.0 RAW, go to section 3.2.



3.2 Installation of Palma 2.0 heater

Warning! The distance from the inflammable objects should be at least 20"/50 cm. Adjust the heater so that there is a distance of at least 16"/40 cm between the wall and the air intake opening.

Warning! A free space of 1.5 meters should be left in front of the output opening if possible. Place the heater in your greenhouse (4).

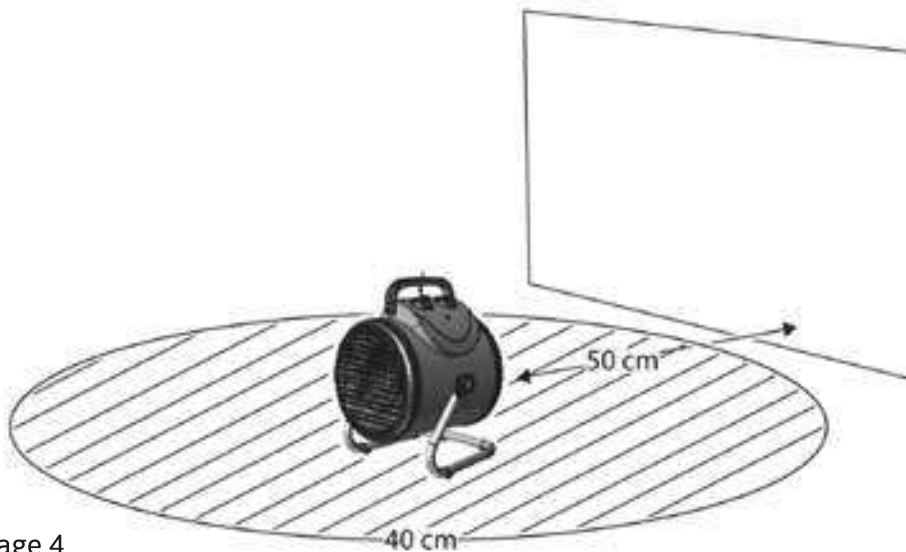


Image 4

Now insert the mains plug into the socket of the Thermo 2(5) or, if operating without the Thermo 2, directly into the mains socket (6).

Warning! Never insert or remove the power plug with wet hands. When using a multiple socket or an extension cable please ensure that the maximum current carrying capacity is not exceeded. Cable drums must always be completely unrolled. Do not wrap the connection cable around the device and never operate the device with wound cable.



Image 5

To set the Palma 2.0 RAW to wintermode, see section 4.2.

To set the Palma 2.0 to wintermode, see section 4.3.

To set the summer mode, see section 4.4.

Warning! Never insert or remove the power plug with wet hands.



Image 6

4 Use the Palma 2.0 and Palma 2.0 RAW

4.1 General operation

The Palma 2.0 air circulation heater is fitted with a selector switch and a thermostat. Use the selector switch to choose one of the 3 possible operating modes. Set the desired room temperature using the thermostat. An integrated Lamp indicates operation (7).



Image 7

Mode of the Palma 2.0

1. Device not in operation
2. Air circulation without heating (circulation in constant operation)
3. 2 kW heating output (heating controlled by thermostat, air circulation in constant operation)

4.2 Use the Palma 2.0 RAW in winter mode

Select position 3 as the mode on the selector switch and set the thermostat to maximum. The operation lamp starts to light up when the Palma 2.0 Manual is switched on (8).



Image 8

Check the room temperature using a thermometer (9).

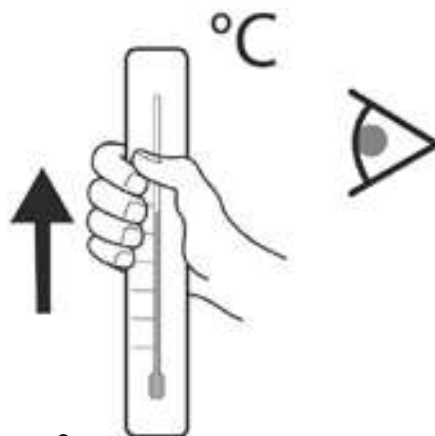


Image 9

When the desired room temperature is reached then slowly turn the thermostat in an anticlockwise direction until the operation lamp switches off (10).



Image 10

The heater will now maintain the set temperature by re-starting the heating function when the room temperature falls below this level. In the event of temperature discrepancies you may need to adjust this a little.

Please note! Unfortunately it is not possible to print a temperature scale on the thermostat switch as behavior will differ depending on size, insulation, filling level and location of each greenhouse.

4.3 Use the Palma 2.0 in winter mode

Set the desired room temperature on the wet room thermostat Thermo 2 (11). The setting can be found in the Thermo 2 operating instructions.



Image 11

Select position 3 as the mode on the selector switch. And set the heater thermostat to the maximum setting (12).



Image 12

The wet room thermostat Thermo 2 will now take over temperature regulation and the Palma 2.0 heater will be switched on if the room temperature falls below the set level. When the desired room temperature has been reached, slowly turn the thermostat against clockwise, to the upper shut-off point (10).

4.4 Use the Palma 2.0 and Palma 2.0 RAW in summer mode

Please note! The Thermo 2 is not required for summer operation. Just plug the Palma 2.0 heater directly into a mains socket. In the summer months use of the air circulation mode can achieve substantial reduction of the greenhouse temperature.

Select mode 2 on the selector switch of the Palma 2.0 heater and open the door or the roof window on your greenhouse (13). The position of the thermostat switch is irrelevant here.



Image 13

The greenhouse air that is heated by the sun is constantly circulated by the air circulation mode and thus moved outside. At the same time this measure regulates the humidity in the greenhouse and promotes the pollination of your plants.

4.5 Safety feature

Temperature controlled circuit breaker: If the device overheats the temperature-controlled circuit breaker will switch the device off temporarily.

To switch the device back on, turn the heater off for 5 to 10 minutes to cool down (14).

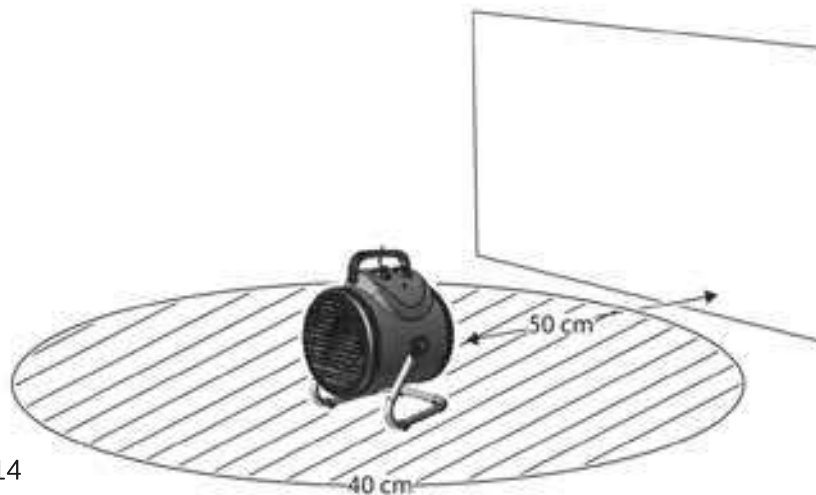


Image 14

Another reason for the shutdown would be blockage of the intake or outlet opening.

- In this case please remove the corresponding objects (14). It could also be an indication that the ventilator has failed.
- In this case switch the heater off, remove the plug and contact an authorized specialist to arrange repair.



Image 15

5 Cleaning, maintenance, environment and disposal

5.1 Cleaning and maintenance

Warning! Switch the device off before each cleaning and leave it to cool for approximately 30 minutes before beginning cleaning. **Warning!** Do not use any abrasive, caustic or cleaning materials. Clean the casing with a damp cloth (not wet), vacuum cleaner or feather duster.

5.2 Environment and disposal

Please note! Only dispose of devices at a corresponding collection centre.

Please note! Only authorized specialists are permitted to carry out repairs on the device.

Please contact the manufacturer or distributor in this regard.

Warning! Incorrectly executed repairs can represent a hazard for the user and other persons.

The manufacturer does not accept responsibility for any damage caused by frost, insufficient heating performance for the room dimensions or insufficient heat insulation.