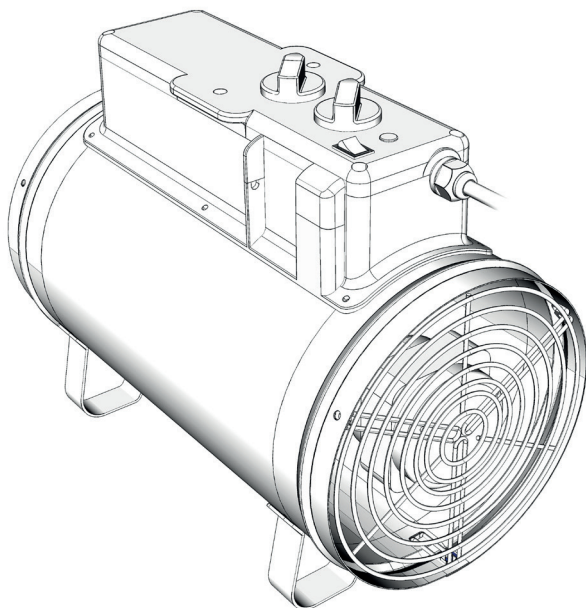




Installations- und Gebrauchsanweisung Installation and operating instruction

PHOENIX PHX 2.8/PHX2.8/GB



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.

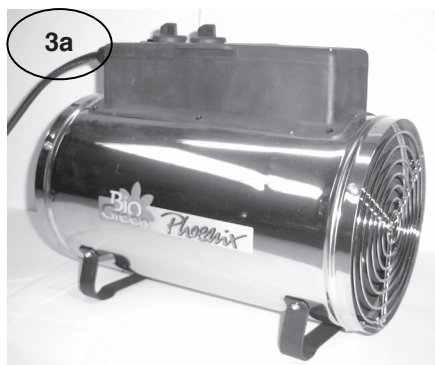
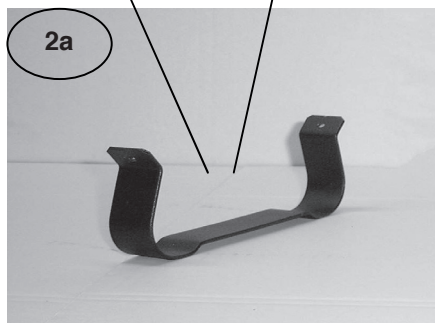
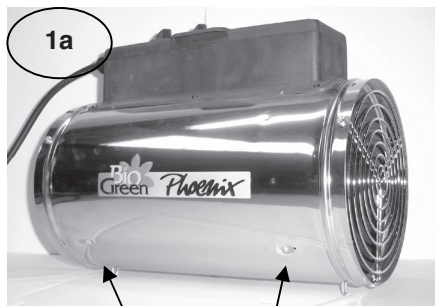
Index

Installation		page 3
DE	Bedienungsanleitung	page 4
EN	Operating Instructions	page 11
FR	Mode d'emploi	page 18
SV	Bruksanvisning	page 25
FI	Käyttöohje	page 32
IT	Istruzioni per l'uso	page 39
DK	Brugsanvisning	page 46
NL	Gebruiksaanwijzing	page 53
CZ	Návod k instalaci a obsluze	page 60

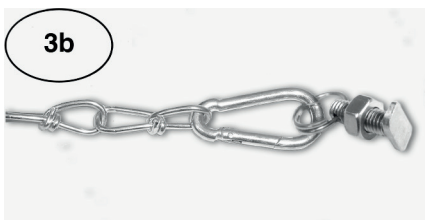
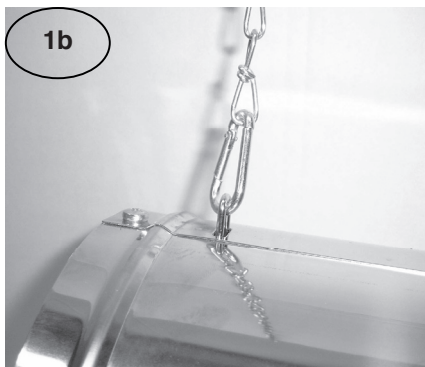


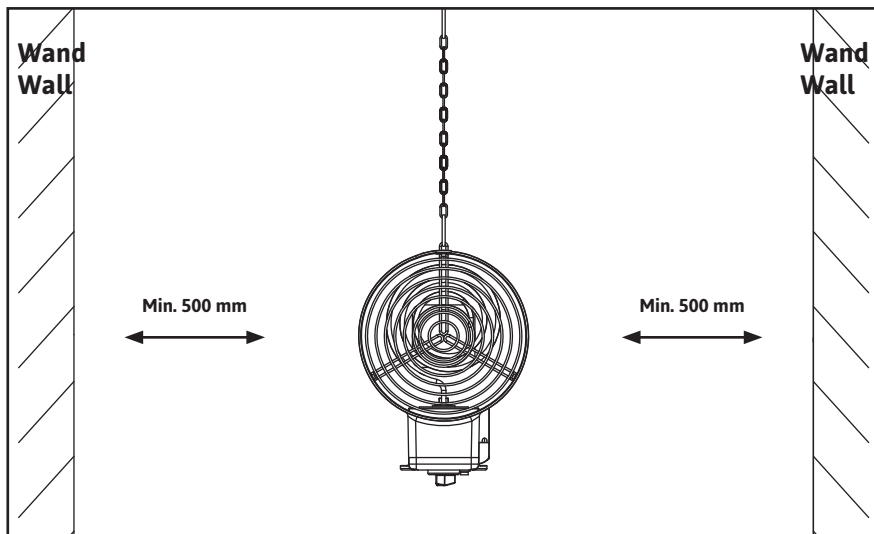
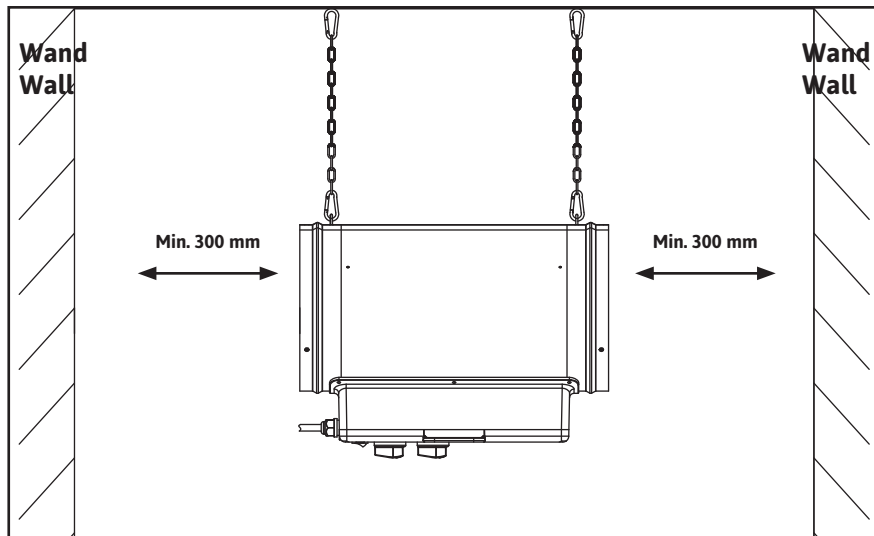
Installation

Stehende Installation
Standing installation



Hängende Installation
Hanging installation





1. Delivery Checklist

- 1x air circulation heater PHX 2.8/GB
- 2x foot
- 2x chain with snap hook
- 2x cropped head bolts & nuts with rings
- 4x self tapping screw
- 4x locking washer

2. Technical data

Apparatus type:	PHX 2.8/GB
Power supply:	230 V ~ / 50-60 Hz
Power:	1000 / 1800 / 2800 W
Current:	13 A (max.)
Control range:	0 – 26 °C
Protection category:	I
Protection class:	IP X4

IMPORTANT:

Familiarise yourself with the instructions in this manual and the general safety and hazard notes before installation. Keep this document in a safe place for future reference. If you have any doubts about the safety of the apparatus, please consult a skilled person. When installing in a greenhouse, please ensure that the electrical connections are made by a qualified person.

3. General

After unpacking and before using for the first time, ensure that the apparatus and all the accessories are not damaged. In case of transport damage, please contact your distributor or the manufacturer immediately. Keep packaging material (polybags, polystyrene, nails etc.) out of reach of children, since such materials are hazardous.

The PHX 2.8/GB electric air circulation heater is designed to heat greenhouses and winter gardens uniformly, also saving energy. Its defining features include simple operation and minimum installation space requirement. This apparatus is designed for connection to 230 V ~ / 50-60 Hz AC only. It must be protected against heavy soiling and moisture. Any use other than that described above may damage the apparatus and also carries risks of e.g. short circuits, fire, electric shock, etc. It is imperative that the safety and installation instructions are followed.

4. Safety and hazard notes

- Use only with a 230 V ~, 50/60 Hz mains socket with a RCCB (Residual Current Circuit Braker) protection. Never attempt to operate the apparatus with a different voltage.
- If you are unsure about usage, safety or connection of the apparatus, please consult an authorized specialist.
- This apparatus is for indoor use only.
- The apparatus must be unplugged from mains before opening the cover or removing components.
- Never touch the mains plug with wet hands.
- Never pull on the power cable, pull the plug only by gripping it by the surfaces provided.
- Never store or use flammable materials or spray near the apparatus. **Fire hazard!**
- Do not use the apparatus in a flammable atmosphere (e.g. close to combustion gas or spray cans). **Explosion and fire hazard!**
- Do not cover the heater. **Fire hazard!**
- Never install the apparatus near taps, basins or other sources of water. Also never connect your heater to a power supply unless its surfaces are dry.
- Do not insert objects into the openings of the apparatus. Risk of injury, electric shock or risk of damage to the appliance!
- The enclosure heats up during operation. Install the appliance in such a way so as to prevent accidental contact. **Danger of burning!** After switching off, the appliance cools down only slowly. Carry only by the handle provided.
- Never dry flammable objects in front of the exhaust openings. **Fire hazard!**
- When installing, ensure that the connecting cord is not crushed or damaged by sharp edges. If such damage should expose the wires, the appliance must under no circumstances be connected to the power supply. **Life-threatening!**
- Always disconnect from the mains before cleaning the appliance. Clean only with a damp (not wet) cloth.
- Always disconnect from the mains if the appliance will not be used any length of time. During this time, store your heater in a protected and dry place.
- If it may be assumed that the apparatus can no longer be safely operated, it must be decommissioned and protected against accidental operation. This is the case if:
 - the apparatus or mains chord are visibly damaged
 - the apparatus no longer operates
 - after extended storage in unfavourable conditions
 - after rough transport conditions
- Apparatus operated from mains voltage must be kept away from children.
- The apparatus is not suited for use in areas used for animal husbandry.
- These operating instructions are part of the apparatus and should be kept in a safe place. If the apparatus is passed on to third parties, it must be passed on together with the operating instructions.
- In industrial facilities, the Accident Prevention regulations for electrical installations and operating materials of the industrial employer's liability insurance association are to be observed.
- Never spill fluids on the apparatus. There is a danger of fire or lethal electric shock. In such an event, unplug the mains and consult a skilled person.
- Should you be unsure about the proper connection or should any questions arise that are not dealt with in these operating instructions, please contact the manufacturer or an authorized person.
- This apparatus may not be operated by persons (including children) with limited physical, sensory or mental faculties, or by persons who are not sufficiently experienced or adequately knowledgeable in the use of the product, unless such persons are supervised or instructed in the use of the apparatus by a person responsible for their safety.

5. Installation

The electrical appliance may only be operated from earth leakage protected sockets! Before operating the apparatus, ensure that this is the case for the socket to be used. Make sure that the maximum current is not exceeded when the outlet has more than one socket or when using extension chords. cable reels must always be fully unwound.

Ensure that the air circulation heater is disconnected from mains before or during installation. Select a place for installation where the apparatus will not be exposed to rain or may fall into water.

Route the connecting cable such that it will not be a stumbling hazard, cannot be crushed or come into contact with hot objects. Use only extension leads matched to the power rating of the apparatus and complying with the applicable safety regulations. Do not wind the connecting lead around the apparatus and never operate the apparatus with a coiled lead.

Standing installation:

To use the PHX 2.8/GB greenhouse heater as a floor mounted apparatus, the supplied feet must first be fitted.

The following supplied components are required for assembly:

- 2x PHOENIX feet
- 4x self tapping screws
- 4x serrated washers

Have a Phillips screwdriver at hand.

The PHOENIX heater comes with pre-drilled holes in the housing for attaching the feet. Fasten the feet here, using the self tapping screws with serrated washers (see illustration on Page 3).

Your PHOENIX air circulation heater is now ready to use as a floor-mounted apparatus.

Hanging installation:

To use the PHOENIX 2.8 air circulation heater as a hanging apparatus, the supplied chains must first be fitted.

The following supplied components are required for assembly:

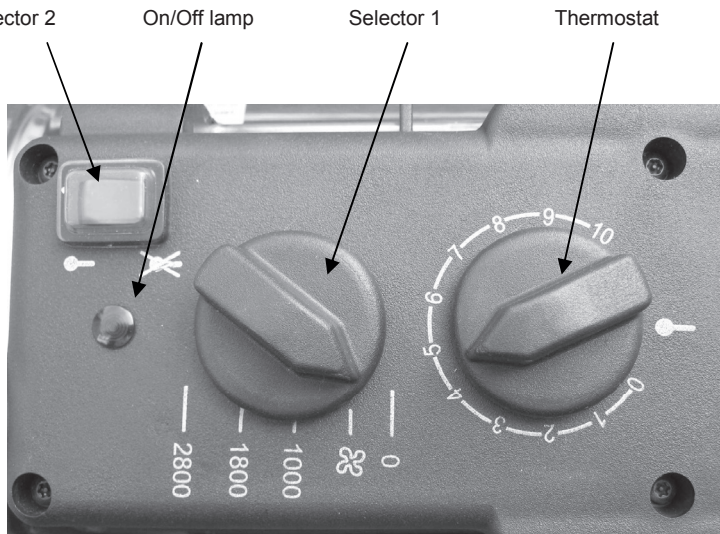
- 2x PHOENIX hanging chains
- 2x V-hooks

The PHOENIX heater comes with metal lugs on the housing to hook the chains, using the snap hooks. The other two snap hooks then hook into the V-hooks. These V-hooks are then fastened to the profiles in your greenhouse (see illustration on Page 3).

Your PHOENIX greenhouse heater is now ready to use as a hanging heater.

6. Operation

Connect the heating apparatus to any 230 V ~ 50/60 Hz AC socket. The PHOENIX air circulation heater has two selector switches and a thermostat. Using the selector switches, you may select one of the 8 possible operating modes. Set the desired greenhouse temperature on the thermostat (control range 0-26 °C). An integral lamp signals heating operation.














Thermostat:

The thermostat is linear and infinitely variable from 0 - 26 °C. The printed figures from 0-10 on the adjustment wheel are for general orientation to the temperature range being selected. This means that the increasing numbers each mean a rise in temperature of approx. 2.6 °C (see example below).

Example.:	Number	Temperature range
	0 - 1	≈ 0 - 2.6 °C
	1 - 2	≈ 2.6 - 5.2 °C
	2 - 3	≈ 5.2 - 7.8 °C
	3 - 4	≈ 7.8 - 10.4 °C etc.

Refer to page 15 in the section 'winter operation' to find out how to set the temperature exactly.

Selector switch:

Item	Selector switch 1	Selector switch 2	Function
1	0	 	Appliance not in operation
2a			Circulating air without heating (circulating air controlled by thermostat)
2b			Circulating air without heating (circulating air in constant operation)
3a	1000		1000 W heating performance with circulating air (heating and circulating air controlled by thermostat)
3b			1000 W heating performance with circulating air (heating controlled by thermostat, circulating air in constant operation)
4a	1800		1800 W heating performance with circulating air (heating and circulating air controlled by thermostat)
4b			1800 W heating performance with circulating air (heating controlled by thermostat, circulating air in constant operation)
5a	2800		2800 W heating performance with circulating air (heating and circulating air controlled by thermostat)
5b			2800 W heating performance with circulating air (heating controlled by thermostat, circulating air in constant operation)

Winter operation:

- Step 1: Select the desired operating mode on selector switches 1 and 2.
 Depending on the size and location of the greenhouse we recommend selecting a heating performance of 2800 watts or 1800 watts in the winter months. On the other hand, the lower performance of 1000 watts is often sufficient in the transition periods (autumn and spring).
 1800 watts: Ideal frost protection up to a greenhouse size of approximately 12 m².
 2800 watts: Ideal frost protection up to a greenhouse size of approximately 20 m².

Note: If you have sensitive plants in your greenhouse over the winter (e.g. cacti) that cannot tolerate fluctuating temperatures then we recommend heating in operating modes 3b, 4b or 5b. These operating modes give you continual air circulation and do not produce large temperature gradients between upper and lower layers of air.

The same is also true for greenhouses with very high humidity. The continual circulation of air prevents the occurrence of mould and fungi.

If you have robust plants and merely wish to prevent frost you can use operating modes 3a, 4a or 5a. Please consult a gardener if you have questions in this regard.

Step 2: Select the desired temperature range on the thermostat adjustment wheel. Refer to the example on page 8 to see which position on the thermostat corresponds to the desired temperature and then set it accordingly. Now leave the heating to operate for several hours and monitor the room temperature with the help of a thermometer (MIN-MAX thermometer recommended). Then correct the setting slightly upwards or downwards if necessary if the desired temperature is not maintained.

This setting process only needs to be carried out once during initial operation. The heating system will keep the temperature constant once the correct setting has been discovered.

Note: It is unfortunately not possible to print the temperature scale on the adjustment wheel of the thermometer as it reacts differently depending on size, insulation, stocking and location of each greenhouse.

Recommendation:

If you would like to keep valuable plants in your greenhouse over the winter then we recommend installing a second heat source that is activated if this heating fails (e.g. during a power cut). This protects your plants from freezing.

Summer operation:

In the summer months you can use the air circulation mode to achieve substantial cooling of the greenhouse temperature. Select operating mode 2b for this purpose and open the door or roof windows in your greenhouse. The position of the thermostat adjustment wheel is irrelevant in this case.

The greenhouse air that is heated by the sun is continually circulated in circulation mode and is transported outside. This measure also regulates humidity in the greenhouse and promotes pollination of your plants.

Note: Never use operating mode 2a for summer operation. As the air circulation is regulated by the thermostat in this mode it would switch off the fan after a short period of strong sun exposure. This would mean that the air circulation and the associated cooling would no longer be assured.

Safety feature

Temperature-controlled switch-off: The apparatus will automatically switch off temporarily if it should overheat. To restart, switch off the heater for 5 to 10 minutes to cool down. Another reason for automatic switch-off may be blockages in the air inlet or exhaust apertures. In this case, please remove the obstructing objects.

It may, however, also be an indication that the fan has failed. In this case, switch off the heating apparatus, unplug it and call on an authorised technician for repairs.

7. Cleaning, repairs and disposal

- Do not use abrasive or caustic cleaning agents.
- Before cleaning, switch off the apparatus and allow it to cool down for about 30 min. before starting with cleaning.
- Clean the enclosure with a damp cloth (not wet), vacuum cleaner or feather duster.
- Never submerge the apparatus in water.
- Take the material to be disposed of to an appropriate waste disposal point.
- The apparatus may only be repaired by authorised persons. Please contact the manufacturer or distributor in this regard.
- **Attention!** The guarantee is null and void in the case of improper repairs.
- Flawed repairs pose a danger to the user and other persons.

8. Warranty and servicing

We offer you a 2-year unlimited manufacturer's warranty (effective from the date of purchase) on all Bio Green products. Damages arising from external force, improper use as well as non-observance of cleaning and servicing and these operating instructions, are excluded under this warranty.

The manufacturer is not responsible for damages arising from frost, inadequate heating power for the size of the space to be heated, or due to inadequate thermal insulation.

Important note

Opening of the appliance and possible repairs may only be performed by authorised technicians in due consideration of the applicable repair provisions. Only original components may be fitted.

The warranty covering proper operation and operating safety is valid only if the apparatus is properly installed and handled. This is also applicable with respect to statutory provisions for technical working materials as well as applicable accident prevention regulations.

For warranty claims, please complete the enclosed warranty and info card!

If you have any further questions, please contact our Bio Green Service:

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