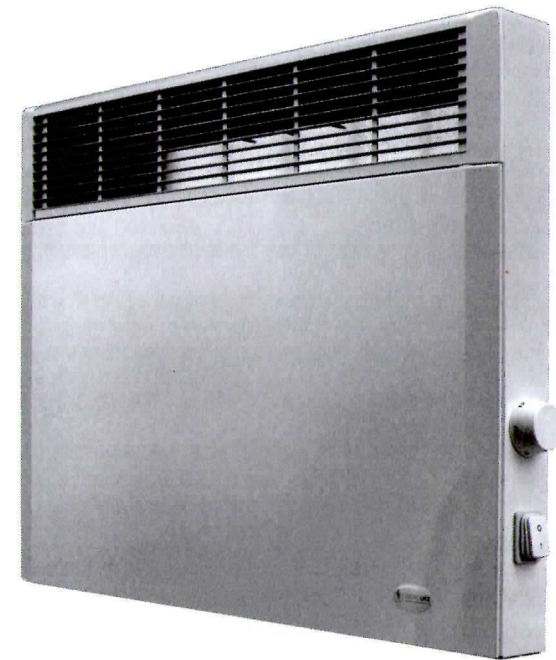




**LUCHT LHZ**<sup>®</sup>  
Elektroheizung GmbH & Co. KG

# INSTALLATION AND OPERATING INSTRUCTIONS



(Indicative image only)

**Models: Crystal 500 – Crystal 2500**

Read all instructions before using this appliance. Keep them for future reference.

## Important Safety Instructions

- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Young children should be supervised to ensure that they do not play with the appliance;
- WARNING:** In order to avoid overheating, do not cover this heater;
- The heater must not be located immediately below a socket-outlet;
- To avoid burns, do not touch the hot surface of the heater when it is in use. Use handle when moving this heater, keep combustible materials, such as drapery and other furnishings at least 900mm from the front of the heater and away from the side and the rear.
- Do not run the cord under carpet and do not cover it with throw rugs, runners or the like. Place the cord away from a traffic area and where it will not be tripped over.
- Connect the heater to properly grounded outlets only.
- Use the heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock or injury to persons.
- Do not use this heater in the immediate surroundings of a bath, a shower, or a swimming pool;
- If the supply cord is damaged it must be replaced by the manufacturer, authorised service agent, or similarly qualified persons in order to avoid a hazard;
- CAUTION:** In order to avoid a hazard due to inadvertent resetting of the thermal cut-out, this appliance must not be supplied through an external switching device such as a timer, or connected to a circuit that is regularly switched on and off by the utility;
- Please do not place your clothes or towel on the radiator for fear of over heating.
- Always use the heater in an upright position; make sure the heater is on a dry and even surface.
- Do not insert or allow foreign objects to enter any ventilation or exhaust opening, as this may cause an electric shock, fire or damage to the appliance.
- Do not use your appliance with an extension cord unless it has been checked and tested by a qualified electrician or electrical supplier.
- This product is for household use only. Do not use the appliance for any other purpose than its intended use.
- Do not position the appliances in close proximity to curtains or other combustible materials, explosive objects, or objects which can be easily deformed or deteriorated. Keep combustible material such as furniture, cushions, bedding, paper, clothes, curtains etc. at least 1.0m away from the heater.
- Do not operate in areas where gasoline, paint or other flammable liquids are used or stored.
- The appliance is not suitable for outside use

### WARNING - THIS APPLIANCE MUST BE EARTHED.

This heater must be used on an AC supply only and the voltage marked on the heater must correspond to the supply voltage. Before switching on, please read the safety warnings and operating instructions.

Model	Heating capacity (W)	Dimensions		
		a (mm)	b (mm)	weight (kg)
Crystal 500	500	345	150	3,1
Crystal 1000	1000	415	220	3,6
Crystal 1500	1500	566	370	4,4
Crystal 2000	2000	695	500	5,2
Crystal 2500	2500	915	720	6,0

- nominal stress: 230V AC, 50 Hz
- protection class: I
- degree of protection: IP 24
- room thermostat: 4°C till 40°C

## 1. Instructions to use

### Manual Thermostat

#### Operation

Connect the heating convector to the mains supply to set it into operation.

#### Switching the appliance on

Switch on the appliance by setting the tumbler switch to position "1".

#### Switching the heating on

Switch on the heating by turning the temperature selector switch and choose the required temperature. The temperature range extends from 4°C to 40°C graduated into 10 steps. The thermostat switches off the heating as soon as the preset ambient temperature is reached, which will then be kept constant by cyclic heating. The high consistency of the thermostat (below 2 K) provides a constantly comfortable temperature and thus ensures power-saving heating.

#### Anti-freezing protection

When setting the temperature selector switch to position "1" the thermostat automatically cuts in if the ambient temperature falls below 4°C.

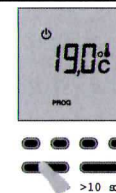
#### Switching the appliance off

Switch off the appliance by setting the tumbler switch to position "0".

### Integrated Digital Programmable Thermostat

#### Operation

When in Off mode, press and hold down the On/Off button for 10 seconds to access the first configuration menu.

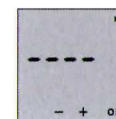
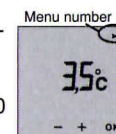


#### Menu 1: ECO Set-Point Adjustment

By default, Economy setting = Comfort setting - 3.5°C.

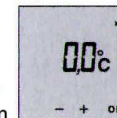
This reduction can be set between 0 to -10°C, in steps of 0.5°C.

To adjust the reduction, press on the + or - buttons then press OK to confirm and go to the next setting. To allow the user to modify the set-point, press on the + button in Economy mode until "----" is displayed on the screen.



#### Menu 2: Correction of the measured temperature

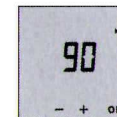
If there is a difference between the temperature noted (thermometer) and the temperature measured and displayed by the unit, menu 2 acts on the measurement of the probe so as to compensate for this difference (from -5°C to +5°C in steps of 0.1°C).



To modify, press on the + or - buttons then press OK to confirm and go to the next setting.

#### Menu 3: Backlight time out setting

The time out can be adjusted between 0 and 225 seconds, in steps of 15 seconds (set on 90 seconds by default).



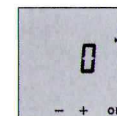
To modify, press on the + or - buttons then press OK to confirm and go to the next setting.

#### Menu 4: AUTO mode temperature display option

0 = Continuous display of room temperature.

1 = Continuous display of set-point temperature.

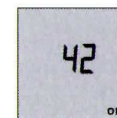
To modify, press on the + or - buttons then press OK to confirm and go to the next setting.



#### Menu 5: Product number


This menu allows you to view the product number.

To exit the configuration mode, press OK.




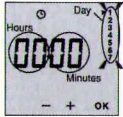


## Time Setting

In Off mode, press the  button. The days flash.

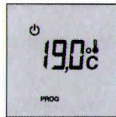
Press + or - to set the day, then press OK to confirm and go on to set the hour and then the minutes.

Press the  button once to access the programming, and press the On/Off button once to exit the setting mode.

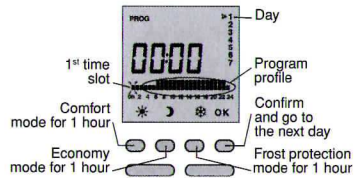


## Programming

When starting up, the "Comfort mode from 8am to 10pm" program is applied to all the days of the week.



To change the programming, press the **PROG** button in Off or AUTO mode. The 1st time slot flashes on and off.




### Quick programming:

To apply the same program to the following day, press and hold the OK button for approximately 3 seconds until the program of the following day is displayed.

To exit the programming mode, press on the On/Off button.

## Use

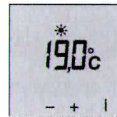
The Mode button allows you to select the different operating modes: Comfort, Economy, Frost Protection, and Programming **AUTO** mode.

Pressing the  button gives you the temperature of the room or the set-point temperature, according to your configuration settings in menu 5.

If the **ON** icon is displayed, this means that the device is in heating demand mode.

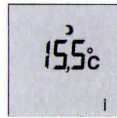
## Continuous Comfort

Pressing and holding the + or - buttons lets you change the current set-point (+5 to +30°C) in steps of 0.5°C.



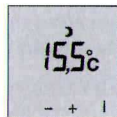
## Continuous Economy mode

The Economy set-point is indexed according to the Comfort set-point. The reduction can be modified in the configuration settings for menu 1.



### Modifying the Economy set-point

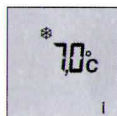
The set-point can be modified if it was authorized in the configuration settings in menu 1 ("-----").



Pressing and holding the + or - buttons lets you change the current set-point (+5 to +30°C) in steps of 0.5°C.

## Continuous Frost Protection

Pressing and holding the + or - buttons lets you change the current set-point (+5 to +15°C) in steps of 0.5°C.




## AUTOMATIC mode

In this mode the device follows the programming set.



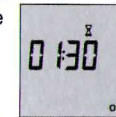
To modify the programming, press the PROG button once.

### Timer mode

To set a set-point temperature for a certain period of time, press on the  button once.


To set the temperature you want (+5°C to +30°C), use the + and - buttons, then press OK to confirm and go on to set the duration.

To set the duration you want (30 min to 72 hours, in steps of 30 min), use the + and - buttons (e.g. 1 hr 30 min), then press OK.



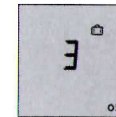
To cancel the timer mode, press on the OK button.

### Absence mode

You can set your device to Frost protection mode for a period between 1 and 365 days, by pressing on the  button.

To set the number of days of absence, press on the + or - buttons, then confirm by pressing OK.

To cancel this mode, press on the OK button again.

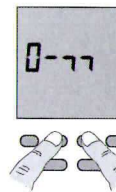


## Locking the keypad

If you press and hold the central buttons simultaneously during 5 seconds, it enables you to lock the keypad. A key symbol appears briefly on the display.

To unlock the keypad, press simultaneously on the central buttons.

Once the keypad is locked, the key symbol appears briefly if you press on a button.



## Technical characteristics

- Power supplied by the power card
- Dimensions in mm (without mounting lugs): H = 71.7, W = 53, D = 14.4
- Screw-mounted
- Install in an environment with normal pollution levels
- Storage temperature: -10°C to +70°C
- Operating temperature: 0°C to +40°C Time Setting

## 2. Important notes

During operation the temperature at the front panel and at the hot-air outlet of the convector may rise above 85 °C. Do not place any objects on or beside the heater, do not put anything between the heater and the wall.

Free air exit must not be hindered by covering the hot-air outlets with any objects such as curtains, pieces of laundry etc., otherwise risk of overheating.

Combustible objects such as wood, paper, textiles etc. as well as highly flammable substances such as wax, petrol, aerosols must not be placed near the heater within the hot-air current. Switch the heater off when carrying out work where highly flammable vapours could emerge, such as laying or sealing parquet or other kinds of floor covering or when using aerosols, floor wax, petrol etc.

### Caution!

The appliance must not be installed in rooms with explosion hazard such as garages etc. Remove the protection foil from all panels prior to first use. Should the heater give off a bad smell when it is heated up for the first time this is caused by manufacturing-related residues, which are harmless to health. This nuisance will disappear within short time.

The rising hot air can cause staining on the wall, a phenomenon seen in all other types of heaters too. The appliance may only be opened by an authorized professional with the power supply disconnected.



### 3. Maintenance

To clean the appliance, switch it off and rub it with a moist cloth using a mild detergent if necessary. Finally polish with a dry cloth. Do not use any abrasive or caustic detergents for cleaning.

### 4. Installation instructions

These installation instructions are an integral part of the appliance and must be kept in a safe place by the user. Pass it on to any subsequent user if the owner of the appliance changes.

Wall convectors are direct electric heaters that are exclusively intended for being fixed to massive walls.

Thanks to graduated heating capacities they can be adapted to any room size. The convector comes complete with connecting cable that must be connected to a wall socket.

The appliance has been designed to be connected to 230 V alternating current (AC).

#### Fixing for Wall Mount installation

Fix the appliance in such way that any potentially combustible objects cannot catch fire. Therefore, the minimum safety distances mentioned below must be kept.

Fix the heater to an upright wall that is resistant to a minimum temperature of 90°C.

Keep a distance of 25 cm to the floor. There shall be a minimum space of 10 cm between the heater and any wooden parts or other objects. Any window sills, roof slopes, brackets etc. must be located at least 50 cm over the hot-air outlets of the heater.

If the appliance is used in bathrooms, install it in such way that the tumbler switch or the temperature selector cannot be touched by a person being in the tub or under the shower.

When fixing the appliance to the wall observe the dimensions given in Fig. 1 and follow all other instructions for installation. Drill two holes of 7mm and fix the appropriate plugs. Screw in the two 4 x 25 mm screws so that a distance of 1 – 2 mm is kept between screw head and wall.

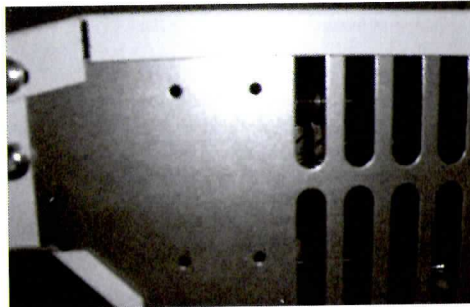
Hang up the appliance on the suspension brackets which are fixed to the back of the heater and push it to the left until it stops.

Then tighten the left-hand screw through the air exit grille and the provided hole in the back panel of the heater. Now the appliance is secured against unintended removal.

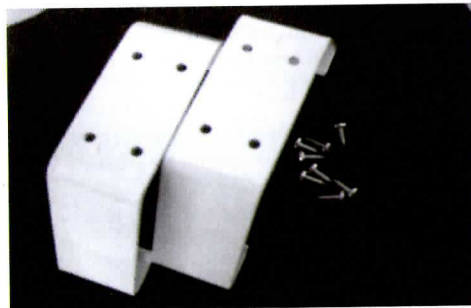
#### Fixing Feet for Freestanding Installation

Fix the appliance in such way that any potentially combustible objects cannot catch fire.

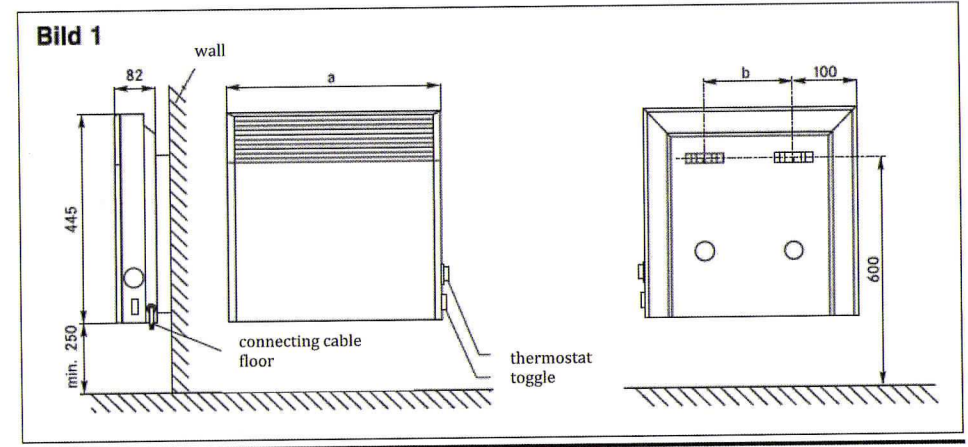
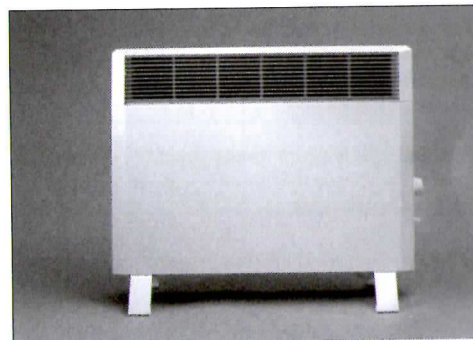
1. Place the convector on a flat desk or work surface.
2. Match the holes on the bottom of the unit (fig. 1) to the 4 holes on both feet (fig. 2).
3. Fasten the feet to the unit by fixing with the screws provided.



(Fig. 1)



(Fig. 2)



### Electrical installation

The appliance has been designed to be connected to 230 V alternating current (AC).

All electrical installation work, in particular protective measures, must be carried out in compliance with the national regulations and statutory provisions of the respective utilities provider.

**The electrical installation may only be carried out in compliance with the installation instructions by an authorized professional!**

The appliance has been designed for fixed connection. Therefore, it is necessary to install a connector socket for fixed connection where the connecting cable of the appliance is to be fixed.

H05 VVF 3 x 1.0 mm (power class 500 W – 2000 W)

H05 VVF 3 x 1.5 mm (power class 2500 W)

Permanent cables must not be connected directly to the appliance!

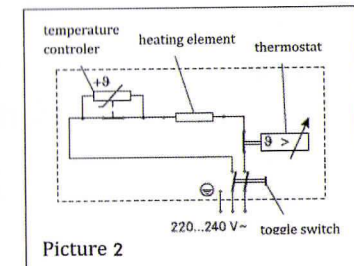
If the electrical installation is done by means of an isolating unit, it should be taken care that the isolation is designed with at least 3 mm separation on all poles.

Type of connection of the appliance: Type Y acc. to VDE 0700 Part 1.

**In case the connecting cable is damaged, it may only be replaced by a repair shop appointed by the manufacturer!**

The minimum distance between appliance and connector socket must be 10 cm. The connecting cable must not have contact with the appliance.

### 5. Diagram of connections



Technical one subject to change