

INSTALLATION AND OPERATION MANUAL

INFRARED HEATER

of REF type



Thank you for choosing a product of **ECO CALORIA Sp. z o.o.!!!**

We are glad to have you as our customers, we believe that you will be satisfied with the use of our heaters. Following the manual and caring out of installation and maintenance by qualified staff ensures proper and safe operation of the device. Not following the manufacturer's recommendations will void the device's warranty.

Introduction

Infrared Heater **ECO ray** are carefully designed to blend into environments old and new, providing a cost effective, pollution free heater.

Please read the enclosed instructions carefully before use. The safety of this heater is guaranteed only by the correct usage in accordance with these instructions, therefore it is recommended that they are retained for future reference.

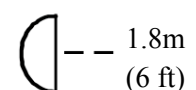
Caution!

- Before using this appliance:
 - Check that the voltage indicated on the type plate corresponds to the mains supply voltage.
 - Ensure that the heater has been securely fixed to the mounting bracket on the wall.
- Disconnect from the supply by removing the plug from the mains socket (or disconnect pole switch) during installation, cleaning and/ or lamp replacement and always ensure that the lamp is cool.
- The heater must not be located immediately below a socket outlet.
- Do not handle the halogen lamp with bare hands. If it is inadvertently touched, remove finger marks with a soft cloth and methylated spirit or rubbing alcohol, otherwise the marks will burn into the quartz glass, causing premature heater failure.
- Do not use an extension cord with this product.
- Keep the mains cord away from the body of the heater which will get hot during use.
- Trzymaj przewód zasilający z dala od promiennika, który rozgrzewa się podczas użytkowania.
- Do not cover or obstruct the heater when in use.
- Ensure that children do not tamper with the heater.
- Do not insert any object through any slot or opening in the heater.
- Do not install less than the minimum mounting distance from the floor.
- 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. Children should be supervised to ensure that they do not play with the appliance.
- This heater is for indoor use only - do not install outdoors or use the heater in a damp area, for example a bathroom or near to a swimming pool.

Warning!

This heater is not equipped with a device to control the room temperature. Do not use this heater in small rooms when they are occupied by persons not capable of leaving the room on their own, unless constant supervision is provided.

This appliance must be connected to a supply that is earthed!



Risk of Fire!

Keep combustible materials such as furniture, papers, clothes and curtains at least 1.8m (6 feet) from the front of the heater and away from the sides and rear.

Specification

Model (without guard)	Voltage (V)	Lamps x power (kW)	Total power (kW)	Minimum height from floor (m)	Minimum distance from ceiling (m)	Minimum distance from side wall (m)	Dimensions L x W x D (mm)	Weight without guard (kg)
REF1A10	230	1 x 1.0	1.0	2.1	0.3	1.5	420 x 225 x 115	4.0
REF1A15	230	1 x 1.5	1.5	2.1	0.3	1.5	420 x 225 x 115	4.0
REF1A20	230	1 x 2.0	2.0	2.5	0.5	1.5	420 x 225 x 115	4.0
REF1B20	230	2 x 1.0	2.0	2.5	0.5	1.5	420 x 390 x 115	5.0
REF1B30	230	2 x 1.5	3.0	3.0	0.5	1.5	420 x 390 x 115	5.0
REF1B40	230	2 x 2.0	4.0	3.5	0.5	1.5	420 x 390 x 115	5.0
REF1C30	230	3 x 1.0	3.0	3.0	0.5	1.5	420 x 525 x 115	6.5
REF1C45	230	3 x 1.5	4.5	3.5	0.5	1.5	420 x 525 x 115	6.5
REF1C60	230	3 x 2.0	6.0	4.5	0.5	1.5	420 x 525 x 115	6.5
REF1D20	230	2 x 1.0	2.0	2.5	0.5	1.5	855 x 255 x 115	7.0
REF1D30	230	2 x 1.5	3.0	3.0	0.5	1.5	855 x 255 x 115	7.0
REF1D40	230	2 x 2.0	4.0	3.5	0.5	1.5	855 x 255 x 115	7.0
REF1E30	230	3 x 1.0	3.0	3.0	0.5	1.5	1280 x 255 x 115	10.0
REF1E45	230	3 x 1.5	4.5	3.5	0.5	1.5	1280 x 255 x 115	10.0
REF1E60	230	3 x 2.0	6.0	4.5	0.5	1.5	1280 x 255 x 115	10.0
REF3C30	400	3 x 1.0	3.0	3.0	0.5	1.5	420 x 525 x 115	6.5
REF3C45	400	3 x 1.5	4.5	3.5	0.5	1.5	420 x 525 x 115	6.5
REF3C60	400	3 x 2.0	6.0	4.5	0.5	1.5	420 x 525 x 115	6.5
REF3F60	400	6 x 1.0	6.0	4.5	0.5	1.5	855 x 632 x 115	13.5
REF3F90	400	6 x 1.5	9.0	5.0	0.5	1.5	855 x 632 x 115	13.5
REF3F120	400	6 x 2.0	12.0	5.0	0.5	1.5	855 x 632 x 115	13.5
REF3E30	400	3 x 1.0	3.0	3.0	0.5	1.5	1280 x 255 x 115	10.0
REF3E45	400	3 x 1.5	4.5	3.5	0.5	1.5	1280 x 255 x 115	10.0
REF3E60	400	3 x 2.0	6.0	4.5	0.5	1.5	1280 x 255 x 115	10.0

Installation

The models REF1A10, REF1A15, REF1A20, REF1B20, REF1B30 i REF1C30 are fitted with 2.0 meters of supply cord for hard wiring therefore it is unnecessary to remove the terminal cover plate in order to carry out normal installation of these models. They can also be specified with 5.0 meters of supply cord and a moulded UK or Euro plug (at an additional cost). Again it is unnecessary to remove the terminal cover plate in order to carry out normal installation of these models.

The models REF1B40, REF1C45 and REF1C60 are fitted with 2.0 meters of supply cord for hard wiring therefore it is unnecessary to remove the terminal cover plate in order to carry out normal installation of these models. All other models have a terminal box in which the mains supply cord can be connected.

Please observe the minimum safe distance between the heater body and any inflammable surfaces.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

For industrial installations, the units must be supplied via double pole miniature circuit breakers (MCB) with instantaneous coefficients in the range 7 to 10 with a separation of at least 3mm between contacts.

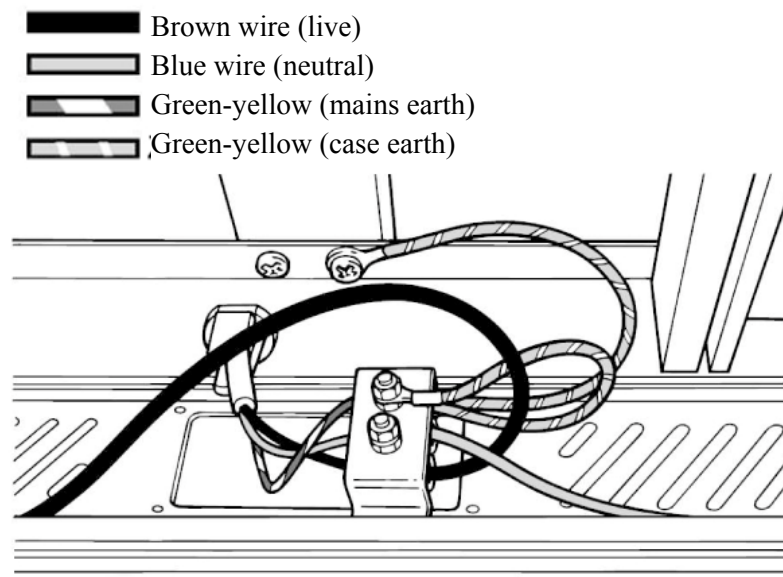


Fig. 1

Mounting

- The heater must be mounted in such a way that the halogen lamp does not slant more than 4° from the horizontal, when viewed from the front.
 - The heater is suitable for installation only on a normally non-flammable surface. Observe the minimum safe distance between the heater body and inflammable surfaces when mounting.
 - Do not position the heater near to furniture or curtains as this could present a fire hazard.
 - Refer to Table 1 for the recommended mounting height for the heater.
 - Keep out of the reach of children.
1. Separate the heater from the mounting bracket by loosening the two nuts at the rear of the heater.
 2. Securely fasten the bracket to the mounting surface using the fixing holes in the bracket.
 3. Replace the heater on the bracket using the nut and bolt supplied and fix in the required angular position by tightening the fixing bolt on the bracket. See Figs 2 and 3.

Always isolate the heater from the mains supply when adjusting the angular position.

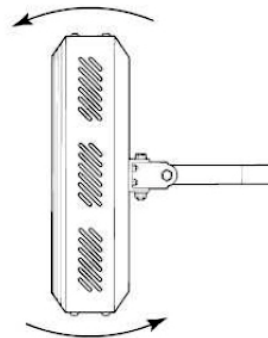


Fig. 2

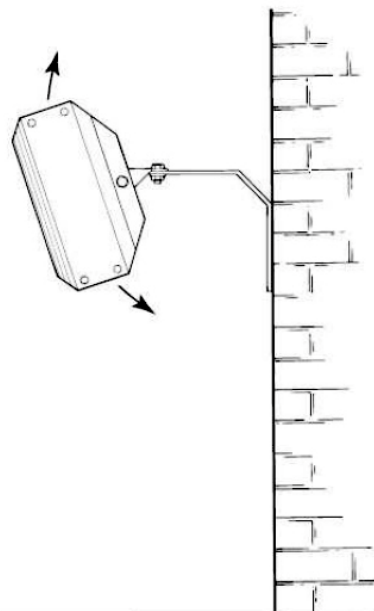


Fig. 3

Maintenance

In the event of heater failure or for spare parts or advice, please contact the manufacturer in the first instance.

- Disconnect from the mains before commencing any maintenance procedure including cleaning.
- To ensure optimum heat effectiveness, periodically it is recommended the guards and lamps should be removed to gain access to the reflector, which should be wiped with a lint free cloth before reassembling. Please take care not to handle the lamp with bare hands.

Replacing the lamp

1. Disconnect from the power supply and remove the heater from wall fixings before attempting to replace any lamp.
2. If a guard is fitted, remove it by flexing one end.
3. Remove the screws from the end extrusion(s) and fascia panels (fitted between lamps on large models) adjacent to the failed lamp (see Fig.4).
4. Remove the panels to expose the lamp connections (see Fig.5).
5. Disconnect lamp leads from terminal plates, and remove lamp retaining clips (see Fig.6).
6. Slide the lamp out through the extrusion.
7. Fit a new lamp, taking care not to mark the reflector or handle the lamp (see caution note).
8. Replace lamp retaining clips and connect the new lamp leads to the terminal plates, ensuring live/neutral leads are also reconnected.
9. Replace the end extrusion(s) and fascia panels securely, using the fixings previously removed and refit the guard.

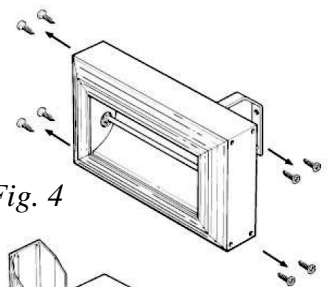


Fig. 4

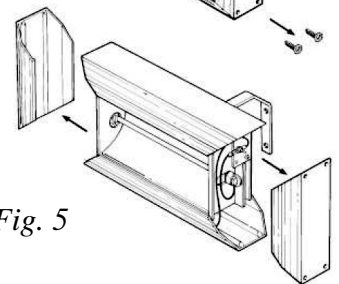


Fig. 5

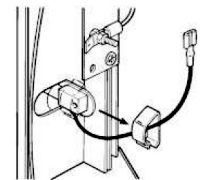


Fig. 6

The use of this symbol indicates that this product may not be treated as household waste. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information about recycling of this product, please contact your local council, your household waste disposal service or the shop where you purchased the product.





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