



***MOBILE - HEAT RADIATOR
CERATHERM 600-2.***

OPERATOR MANUAL.



CE0123

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1. Precautions.

The heat radiator must not be used in rooms where there is a risk of explosion, i.e. in the immediate vicinity of explosive anaesthetic gases or mixtures.

The distance between the surface on which the patient lies, and the lower edge of the radiator, must not be less than 80cm. If this instruction is not followed, prolonged exposure to the heat radiation may cause burns.

“Danger of burns”: Contact with the protective grating and the reflector should be avoided.

“Danger of fire”: The protective grating on the upper side of the radiator must remain unobstructed at all times.

Do not place anything on the protective grating.

If the type of cover on the surface is changed for example, the use of a dark sheet or heating cushions, etc., the support surface may reach excessively high temperatures and thus influence the body temperature of the infant or patient.

After the radiator has been switched on, an acoustic and visual alarm is given after 15 minutes. This can be reset for a further 15 minutes by pressing the illuminated alarm Indicator / Cancel button.

The infant, or patient, must never be left unattended under the operating heat radiator.

When using the heat radiator over incubators, care must be taken to ensure that there is sufficient space between the lower edge of the radiator and heat sensitive material, such as Perspex or Acrylic. The distance must not be less than 50cm. Set the heating power to a maximum of Level ③.

Position the radiator in such a way that there is a distance of at least **80cm, and up to the Full Adjustment height**, between the surface on which the patient lies and the lower edge of the radiator.

Care should be taken when adjusting the mobile stand height to ensure that (i) the heater is switched off and allowed to cool and (ii) the upper section of the stand is supported before the height adjustment-locking knob is released.

If the radiator housing is removed, there is a danger of electric shock. Only suitably qualified personnel should carry out maintenance and servicing.

It is recommended that the use of the radiant warmer is restricted to **trained medical personnel** who are aware of the general risks when using radiant warmers.

It is vital that an independent temperature check, of the infant, or patient, is carried out at regular intervals by supervising personnel.

Use of the radiant warmer can notably increase fluid loss by the infant or patient.

2. Definitions & Symbols.

Note, Important, Caution and Warning.

Note: The remark “Note” is used in the text to indicate procedures or conditions, which might otherwise be overlooked or incorrectly understood. A note may also be used to clarify apparently contradictory or confusing situations.

Important: Similar to note, but used when greater emphasis is necessary.

Caution: The remark “Caution” is used to draw attention to a procedure, which must be followed exactly in order to avoid damaging or destroying the equipment.



Warning: The remark “Warning” is used in the text to draw attention to dangerous situations in connection with the operation, cleaning or maintenance of the equipment if there is a possibility of injury or danger of death to the operator or patient.



Attention: Consult accompanying documents



AC power



Danger! High voltage!



Type B equipment



Attention: Hot surface

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Power ON

Power OFF

3. General.

3.1 Introduction.

This manual contains operator instructions for the erection, use and maintenance of the Mobile Ceratherm 600-2 Radiant Warmer. Viamed Ltd are not liable for the proper functioning of the heat radiator if it is not operated according to the instructions, if the maintenance recommendations in this manual are not followed or if repairs are carried out using non-approved components.

Only suitably qualified personnel should perform calibration and repairs. Maintenance documents are obtainable from Viamed Ltd.

The personnel who work with this heater should read this manual carefully and should fully understand all instructions contained therein. The manual should be kept so that it can be easily inspected; it is advisable to store it in an easily accessible place. Contact Viamed Ltd should you require any further information.

3.2 Technical Data.

The technical data for the Ceratherm heat radiator are shown in "Table A". All technical data may be changed without prior notice.

Table A.

Current requirement.	220-240V _{AC} , 50/60Hz, 630W.
Protection class.	1.
Degree of protection.	B IP20.
Test provision.	IEC 601-2 TUV / CE.

Size.	Width 21cm, Length 55cm, Height 9cm.
Weight.	4.9 Kg (heat radiator only). 41 Kg (mobile unit)
Mobile Base.	Width 61cm, Length 82cm, Height 10cm.
Upright tube.	170 / 195cm maximum height.
Height adjustment.	25cm.
Swivel range of the arm.	180°. (For mobile units)

4. Operating Instructions.

4.1 Structure and use.

The mobile heater is used for warming baby changing tables and resuscitation stations, for additional heat supply in incubators and for adults in operating theatre and during anaesthesia. The built-in ceramic radiator has very good radiation properties and generates invisible infrared radiation in the region of 3 micro/M. The skin very readily absorbs this radiation spectrum and the patients' skin colour is not affected.

4.2 General description.

Refer to the front & rear diagrams on page 9.

The Ceratherm 600-2 heat radiator has 4 heat output settings, which can be individually set in the range 20% - 99%.

These output settings are indicated by the yellow indicators (① - ④). Only one heat output settings can be active during operation. The choice of output setting is made by pressing the reverse button (<) or the forward button (>). The heating indicator lights when the element is being heated.

When the radiant warmer unit is switched on, a time interval begins. After 15 minutes a 5 second audible alarm and a continuous flashing red alarm indicator / cancel are triggered. 8 seconds later, the heat output of the radiator reduces to a pre-set value (the safety setting), with a corresponding change in the duty cycle* of heating monitor indicator. If the alarm is cancelled by pressing the alarm indicator / cancel button, the time interval starts again and the heat radiator returns to the original heat output setting. Alarm cancellation also deactivates the flashing red alarm.

(*) Duty Cycle: the relative length of time when the heating monitor indicator is lit compared to the length of time when it is unlit.

4.3 Assembling the Mobile Warmer

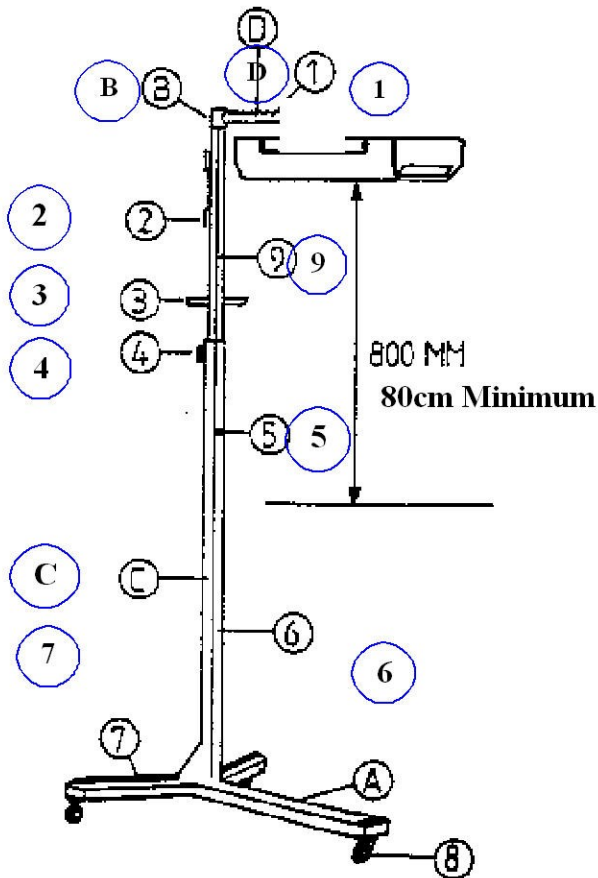
After removing the packaging, check the individual parts for any damage occurring during transport, and compare with the packing list.

1. Mount the lower tubular stand (item C) with the flange and four bolts facing downward on the mobile unit (item A). The tube reinforcement should be at the back.
2. Screw the four nuts and sprung washers, on the lower side of the mobile unit (item A), onto the four bolts, and tighten with an appropriate spanner.
3. Turn the securing screw (item 4) with the star grip, for locking, fully outward by turning to the left.
4. Insert the already mounted upper tubular stand (items 9 & 1) into the lower tubular stand. Ensure that the milled nut is fitted on the side of the securing screw.
5. The securing screw (item 4) can now be tightened. The tubular stand (item 9) must now only be moved within the groove length. It is essential to check whether the tubular stand is limited at its highest position (item 5) and cannot be pulled out any further. Tighten the tubular stand in its lowest position with the star grip (item 4).
6. Fasten the radiator on the flange of the stand arm with the four hexagonal socket screws, then fasten the arm to the mounting bracket.
7. Insert the instrument plug on the 220V AC mains cable into the socket on the back of the radiator.
8. After assembly, the mechanical and electrical functioning of the instrument should be checked.
9. The radiator is started up according to **Section 4.4** below.



WARNING!

Care should be taken to ensure that the mains cable does not become trapped between the articulated arm and the lateral movement limit pin.



- 1 Arm
- 2 Cable Tidy
- 3 Lifting Handle
- 4 Stargrip Securing Screw
- 5 Limiting Pin
- 6 Outer Case
- 7 Mobile unit Base
- 8 Castors
- 9 Inner Sleeve

- A Mobile unit Base
- B Inner Unit
- C Mobile unit Casing
- D Swivel Arm



WARNING!

A risk of injury is present to the operator if care is not taken when adjusting the mobile stand height, ensuring that (i). the heater is switched off and allowed to cool and (ii). the upper section of the stand is supported before the height adjuster locking knob is released.

4.4 Start up.

1. Switch radiant warmer on / off switch to ON. The heater is now switched on.
2. Using the forward and reverse buttons {(<) & (>)}, set the desired heat output to level ① to ④. The current heat output setting is shown by a lit yellow indicator ①, ②, ③ or ④. After about 5 - 10 minutes, the treatment surface will have been preheated.

Note: The heat output of the radiator is set to zero when the reverse button (<) is repeatedly pressed until all yellow indicators (① - ④) are extinguished.

3. Set the light on / off switch to ON.
The non-dazzling halogen light is used for illuminating the treatment area.