

Babytherm[®] 8000 WB Heated Bassinet

Operating Instructions





NOTICE

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Introduction

Operator's Responsibility for Patient Safety

For correct and effective use of the product and in order to avoid hazards it is mandatory to carefully read and to observe all portions of this manual.

The design of the equipment, the accompanying literature, and the labeling on the equipment take into consideration that the purchase and use of the equipment are restricted to trained professionals, and that certain inherent characteristics of the equipment are known to the trained operator. Instructions, warnings, and caution statements are limited, therefore, largely to the specifics of the Dräger design. This publication excludes references to various hazards which are obvious to a medical professional and operator of this equipment, to the consequences of product misuse, and to potentially adverse effects in patients with abnormal conditions. Product modification or misuse can be dangerous. Dräger, Inc. disclaims all liability for the consequences of product alterations or modifications, as well as for the consequences which might result from the combination of this product with other products whether supplied by Dräger or by other manufacturers if such a combination is not endorsed by Dräger, Inc..

The operators of the heated bassinet system must recognize their responsibility for choosing appropriate safety monitoring that supplies adequate information on equipment performance and patient condition. Patient safety may be achieved through a wide variety of different means ranging from electronic surveillance of equipment performance and patient condition to simple, direct observation of clinical signs. The responsibility for the selection of the best level of patient monitoring lies solely with the equipment operator.

Limitation of Liability

Dräger, Inc.'s liability, whether arising out of or related to manufacture and sale of the goods, their installation, demonstration, sales representation, use, performance, or otherwise, including any liability based upon Dräger, Inc.'s Product Warranty, is subject to and limited to the exclusive terms and conditions as set forth, whether based upon breach of warranty or any other cause of action whatsoever, regardless of any fault attributable to Dräger, Inc. and regardless of the form of action (including, without limitation, breach of warranty, negligence, strict liability, or otherwise).

THE STATED EXPRESSED WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NONINFRINGEMENT.

Dräger, Inc. shall not be liable for, nor shall buyer be entitled to recover any special incidental, or consequential damages or for any liability incurred by buyer to any third party in any way arising out of or relating to the goods.

Warranty

All Dräger products are guaranteed to be free of defects for a period of one year from date of delivery.

The following are exceptions to this warranty:

1. The defect shall be a result of workmanship or material. Defects caused by misuse, mishandling, tampering, or by modifications not authorized by Dräger, Inc. or its representatives are not covered.
2. Rubber and plastic components and materials are warranted to be free of defects at time of delivery.

Any product which proves to be defective in workmanship or material will be replaced, credited, or repaired with Dräger, Inc. holding the option. Dräger, Inc. is not responsible for deterioration, wear, or abuse. In any case, Dräger, Inc. will not be liable beyond the original selling price.

Application of this warranty is subject to the following conditions:

1. Dräger, Inc. or its authorized representative must be promptly notified, in writing, upon detection of the defective material or equipment.
2. Defective material or equipment must be returned, shipping prepaid, to Dräger or its authorized representative.
3. Examination by Dräger or its authorized representative must confirm that the defect is covered by the terms of this warranty.
4. Notification in writing, of defective material or equipment must be received by Dräger or its authorized representative no later than two (2) weeks following expiration of this warranty.

In order to assure complete protection under this warranty, the Customer Registration Card and/or Periodic Manufacturer's Service Record (if applicable) must be returned to Dräger within ten (10) days of receipt of the equipment.

The above is the sole warranty provided by Dräger, Inc. No other warranty expressed or implied is intended. Representatives of Dräger are not authorized to modify the terms of this warranty.

Dräger, Inc., Chantilly, VA

Definitions

WARNING !

A **WARNING** statement refers to conditions with a possibility of personal injury if disregarded.

CAUTION !

A **CAUTION** statement designates the possibility of damage to equipment if disregarded.

NOTE: A **NOTE** provides additional information intended to avoid inconveniences during operation.

Inspection = examination of actual condition

Service = measures to maintain specified condition

Repair = measures to restore specified condition

Maintenance = inspection, service, and repair, where necessary

Preventive Maintenance = Maintenance measures at regular intervals

Typing conventions in this manual

LED messages are printed in **bold** type, e. g:

SEt

General WARNINGS and CAUTIONS

WARNING !

Strictly follow this Operator's Instruction Manual

Any use of the product requires full understanding and strict observation of all portions of these instructions. The equipment is only to be used for the purpose specified under "Intended Use" (see page 11). Observe all **WARNINGS** and **CAUTIONS** as rendered throughout this manual and on labels on the equipment.

WARNING !

This device is to be used only in rooms with line power installations complying with national safety standards for hospital patient rooms. (e. g., IEC 601.1, "Safety of Medical Equipment).

To maintain grounding integrity, connect only to a "hospital grade" receptacle. Always disconnect supply before servicing.

WARNING !

DANGER, risk of explosion if used in the presence of flammable anesthetics.

This device is neither approved nor certified for use in areas where combustible or explosive gas mixtures are likely.

WARNING !

Do not use cellular phones within 33 feet (10 m) of the equipment.

Wireless phones may cause malfunction in electromedical equipment.

CAUTION !

Restriction of Distribution

Federal Law and Regulations in the United States and Canada restrict this device to sale by or on the order of a physician.

CAUTION !
Maintenance

In case of malfunction of this device, contact your local DrägerService or our Factory Authorized Technical Service Center.

The device must be inspected and serviced (preventive maintenance) by competent and factory authorized technical service representatives at regular 2 year intervals. A record must be kept on this preventive maintenance. We recommend obtaining a service contract through your vendor.

Maintenance or repair of the Babytherm 8000 WB shall be performed only by Dräger authorized technical service representatives.

Precautions During Preparation

WARNING !

Always select correct mattress type for intended mode of operation (see page 14)

CAUTION !

Do not place any objects above or underneath bassinet where they might be damaged when height adjustments are made.

CAUTION !

Never route patient circuits or lines over top of panels – they may get pinched when folding up panels or when installing cover.

Precautions During Operation

WARNING !

Never leave patient unattended when surrounding panels are down. Risk of patient injury by infant falling out of the bassinet.

WARNING !

When folding up surrounding panels, take care not to pinch patient body parts, circuits, or other items, such as sheets.

WARNING !

Patient Temperature Monitoring

Check the baby's core temperature and skin condition at regular intervals and adjust temperature setting to individual patient needs.

Core temperature of the baby must be monitored particularly carefully during phototherapy or while a radiant warmer is used in conjunction with the Babytherm heated bassinet (see pages 26 - 28).

Skin temperature monitoring is no substitute for core temperature checks since the two parameters do not always closely correlate.

WARNING !

Mattress Heater

When mattress heating is used, the gel mattress must be placed directly on the heated tray surface.

The Dräger gel mattress (part no. 2M 20 827) must not be used in any bassinets other than the Babytherm 8000 WB. Heater plate temperatures above 40 °C (104 °F) implicate the danger of patient burns! Use of a gel mattress with unheated bassinets will result in patient cooling. Always take into account warm-up time of the mattress (approximately 1 hour) before placing a patient in the bassinet.

Do not switch off mattress heater while a baby is lying on the gel mattress as this will result in cooling patient .

WARNING !

Do not switch off mattress heater while a baby is lying on the gel mattress as this will result in cooling patient .

WARNING !

Use foam rubber mattress when the mattress heater is switched off. Gel mattress will cool the infant if mattress is switched off.

WARNING !

Do not obstruct conductive heat transfer by blankets or other insulating covers placed underneath the patient.

WARNING !

Set temperatures in the lower extended temperature range only on the order of a physician. Check the baby's temperature and skin condition at regular intervals

WARNING !

Check the baby's temperature and skin condition at regular intervals

WARNING !

Dräger, Inc. cannot warrant or endorse the safe performance of third party radiant heaters for use with the Babytherm 8000 WB. Specifically, combinations with radiant warmers that are not intended for use with heated bassinets bear risks of excessive overall heat transfer to the patient.

We recommend contacting the manufacturers/ distributors of third party radiant heater units regarding compliance of their product with heated bassinets before attempting to use them in conjunction with the Babytherm 8000 WB.

The following notes on settings of Babytherm 8000 in the presence of radiant heaters are intended as guidelines only and cannot take into consideration the specifics of individual radiant heater designs.

WARNING !

When used with an infant radiant warmer check its operators manual for directions of the correct heat level and distance to the baby.

CAUTION !

Remove from mattress all objects with sharp edges. The gel mattress could be damaged!

Do not fold gel mattress!

CAUTION !

Do not place any objects above or underneath bassinet where they might be damaged when height adjustments are made.

Precautions During Care

WARNING !

Always follow accepted hospital procedures for handling equipment contaminated with body fluids.

WARNING !

Always disconnect power supply before cleaning and disinfecting.

CAUTION !

Do not expose Babytherm 8000 WB to high level of ultraviolet radiation. It may cause cracks in the PMMA (perspex) parts.

CAUTION !

Certain components of the bassinet consist of materials that are sensitive to certain organic solvents sometimes used for cleaning and disinfecting (e. g., alcohols, phenols, halogen releasing compounds, oxygen releasing compounds, strong organic acids, etc.). Exposure to such substances may cause damage that is not always immediately recognized. Sterilization of the bassinet itself with ethylene oxide (EtO) is also not recommended.

CAUTION !

Do not launder mattresses in an automatic washing machine. Do not autoclave mattresses

Precautions During Maintenance

WARNING !

To avoid any risk of infection, clean and disinfect bassinet and accessories before any maintenance according to established hospital procedures – this applies also when returning units or parts for repair.

WARNING !

Preventive Maintenance work on the Babytherm 8000 WB may be performed by trained and factory authorized staff only.

WARNING !

Always disconnect supply before servicing.

WARNING !

Never operate the heated bassinet if it has suffered physical damage or does not seem to operate properly. In this case, always refer servicing to properly trained and factory authorized service personnel.

Intended Use

Babytherm 8000 WB is a heated bassinet intended as a therapeutic device providing warmth for premature and full-term neonates and infants with a weight up to 16 lbs.

Description

Mattress heating

The Babytherm 8000 WB features a mattress heating system that uses conductive heat transfer to warm up patients and to keep them warm. The system consists of a gel mattress, an aluminum heating plate and an electronic control and monitoring unit.

The gel mattress consists of a gel material with excellent heat conducting properties, which won't dislocate even when the bed is tilted. The gel is enclosed by a soft, skin compatible film.

The mattress molds itself to the body contours of the patient lying on it, resulting in a large contact surface, a property that helps conducting heat to the patient and avoids pressure points (anti-decubitus effect). A cold gel mattress, on the other hand, dissipates patient thermal energy. The gel material has an excellent capacity for storing heat. When the power supply is disconnected (e. g. during a transport within the hospital), the patient is kept warm for approximately 15 minutes if sufficiently insulated (blanket, cover).

The aluminum heating plate consists of a 6 mm (1/4 inch) thick aluminum plate and a heater element attached below. It distributes heat evenly over the entire bed area.

The control and monitoring unit is located under the heating plate. The membrane keypad with its buttons and displays faces the side most frequently accessed by caregivers. Temperature is set by the user and adjusts in such a way that the set temperature is just reached in those areas where the patient contacts the mattress. System monitoring includes check routines and alarm features.

Features

With its ergonomic design including:

- foldable side panels for easy care.
- a tilting bed for Trendelenburg and Reverse Trendelenburg position

and options such as:

- electric height adjustment
- swivel cabinet
- infusion bottle holder

it serves an important function during a patient's transition from incubator to standard (unheated) bassinet.

Preparation

Adjusting the Height

Storage of Supplies

Attaching Infusion Bottle Holder

Preparation

Adjusting the Height (Option)

Before operating the Babytherm 8000 WB, always check electric height adjustment:

- Connect power supply.

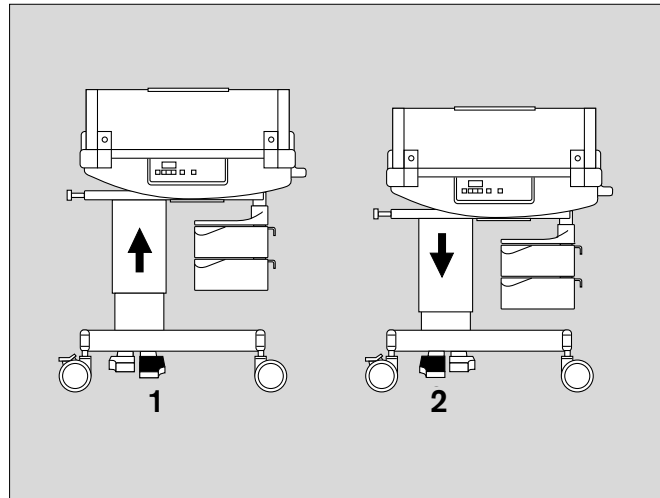
WARNING !

To maintain grounding integrity, connect only to a "hospital grade" receptacle.

- 1 Depress right pedal.
The bassinet is raised.
 - 2 Depress left pedal.
The bassinet is lowered.
- Adjust to comfortable working height.

CAUTION !

Do not place any objects above or underneath bassinet where they might be damaged when height adjustments are made.



Storage of Supplies

Units with electric height adjustment:

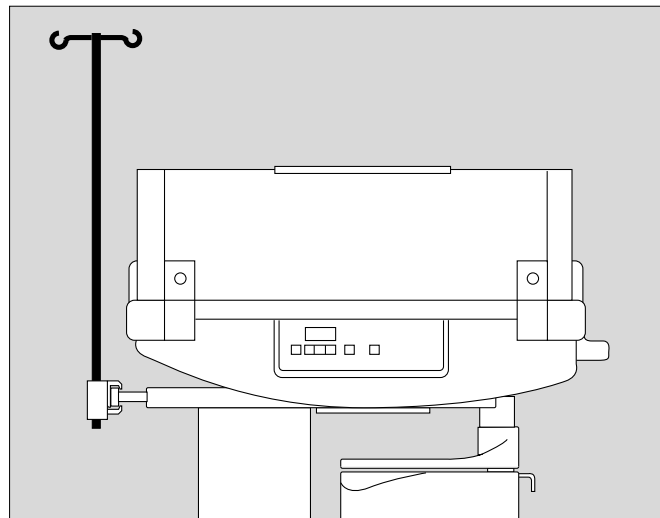
- swivel cabinet (option) with 2 compartments and 1 swivel tray

Units without electric height adjustment:

- 2 open compartments in the column (standard),
- 1 swivel cabinet (option) with 2 compartments and 1 swivel tray.

Attaching Infusion Bottle Holder

- Mount bottle holder to side rail. Secure rail clamp.

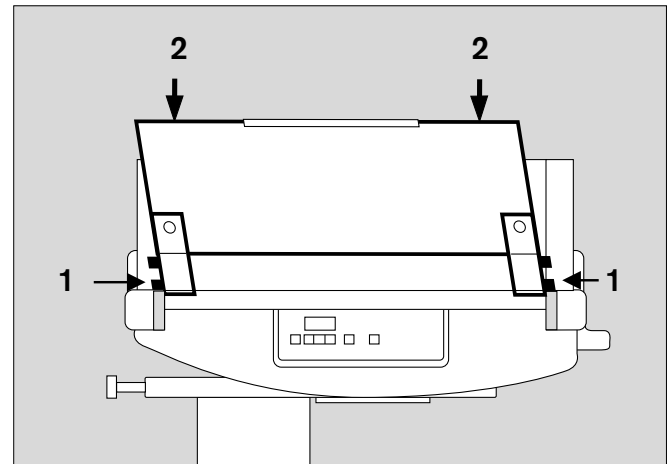


Installing Surrounding Panels

The bassinet is surrounded by two side panels and two end panels, which can be opened independently of each other. End panels have cutouts with U-grommets for routing circuits and patient cables.

- 1 Insert lower pins on panel hinges into the left- and right-hand slots in bassinet base.
- Position panel semi-upright.
- 2 Press panel down firmly, until pins lock into position at the bottom of slots.
- Tilt panel fully upright and let it drop into locking position.
- Install all four panels in the same fashion.

Verify the panels are seated correctly!



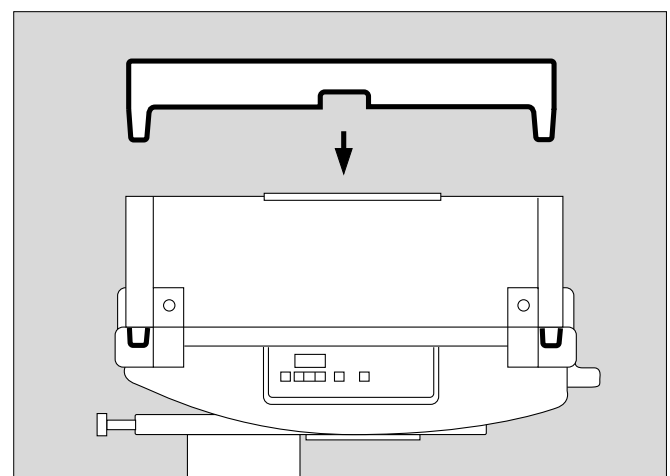
To open:

- Lift panel all the way up, until upper pins on hinge brackets are out of their guide slots, then fold down.

Installing Inside Panels

Use inside panels to protect the baby from falling out when side panel is open.

- Insert pins in tapered holes and press down slightly until the inside panel is firmly seated.
- Repeat for second inner panel.



Fitting a Mattress

- Select mattress type:
 - Operation **with** mattress heating:
Gel mattress 2 M 20 827.
 - Operation **without** mattress heating:
Foam rubber mattress 2 M 21 012.

WARNING !

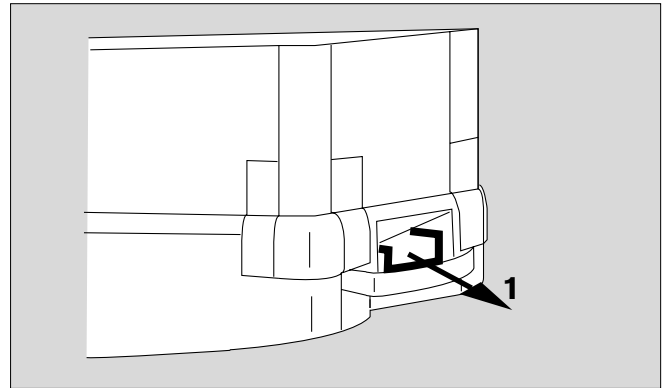
Always fit correct mattress type for intended mode of operation.

- Place the mattress in bassinet and cover it with a cloth.

Tilting the Bed

Tilting the Bed

1 Pull handle of locking mechanism toward front.



2 Push handle down = head-up position.
Pull handle up = head-down position.

- Release locking handle, the bed locks into position.

Maximum tilt angles:

Trendelenburg position: 20°

Reverse Trendelenburg position: 15°

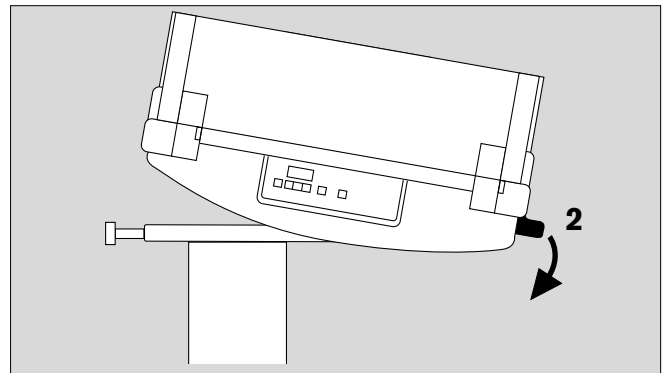
The bed can be tilted in fixed steps of 0.5° each only.

Preferred positions:

horizontal position,

10° Trendelenburg (head up) and

10° Reverse Trendelenburg position (head down).



Tests of Readiness for Operation

Tests of Readiness for Operation

Prior to initial operation

- Verify that supplied voltage agrees with the values indicated on the rating plate next to the power cable.

Prior to each use

- Has the device been disinfected?
- Are the surrounding panels locked securely into place, and closed?
- Are all panels free of cracks and sharp edges?
- Is the correct mattress in the bassinet?

Operation with mattress heater ➡ gel mattress,
operation without mattress heater: ➡ foam rubber
mattress.

- Does the bed tilt properly and lock securely into position?
- Is the thermometer in the cover (if applicable)?
- Are accessories and therapy equipment available and in proper working order?
- Is the gas supply for any devices used available and sufficient?
- Are all circuits and patient lines installed securely and properly?

CAUTION !

Never route patient circuits or lines over top of panels – they may get pinched when folding up panels or when installing cover.

General Precautions During Patient Care

WARNING !

Never leave patient unattended when surrounding panels are down. Risk of patient injury by infant falling out of the bassinet.

WARNING !

When folding up surrounding panels, take care not to pinch patient body parts, circuits, or other items, such as sheets.

- Check that all 4 panels are closed and locked securely into place. The yellow panel fixtures will then be visible above the resting surface.

Heat Therapy

The heating system provided with Babytherm 8000 WB is a mattress heater.

Please refer to pages 26 - 28 for information about use of Babytherm 8000 WB in the presence of radiant heaters.

Heater Safety Precautions

WARNING !

Patient Temperature Monitoring

Check the baby's core temperature at regular intervals and adjust temperature setting to individual patient needs.

The core temperature of the baby must be monitored particularly carefully during phototherapy or while a radiant warmer is used in conjunction with the Babytherm heated bassinet (see pages 26 to 28).

Skin temperature monitoring is no substitute for core temperature checks since the two parameters do not always closely correlate.

WARNING !

Mattress Heater

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The Dräger gel mattress (part no. 2M 20 827) must not be used in any bassinets other than the Babytherm 8000. Heater plate temperatures above 40 °C (104 °F) implicate the danger of patient skin burns! Use of a gel mattress with unheated bassinets would result in patient cooling.

Always take into account warm-up time of the mattress (approximately 1 hour) before placing a patient in the bassinet.

Do not switch off mattress heater while a baby is lying on the gel mattress as this will result in cooling patient.

Always consider effects of additional sources of heat, such as phototherapy lamps or radiant heaters. They increase the heat directed to the patient. Avoid direct sunlight!

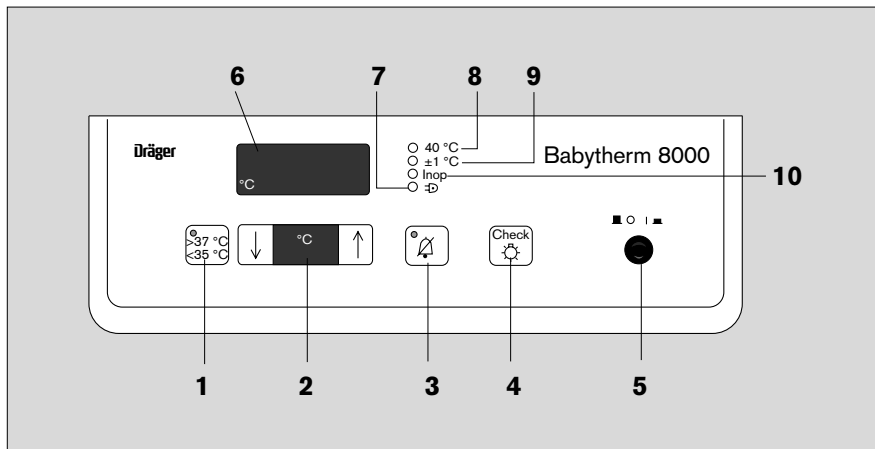
Checking Heater Readiness for Operation

Prior to each use

- Verify that gel mattress was disinfected and is in proper condition.
- Lay gel mattress flat on the aluminum heating plate.
- Connect plug to power outlet.

WARNING !

To maintain grounding integrity, connect only to a "hospital grade" receptacle.





Mattress Heater Control Panel

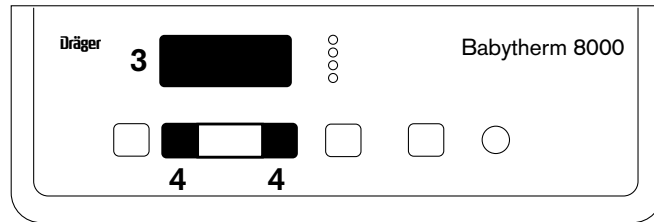
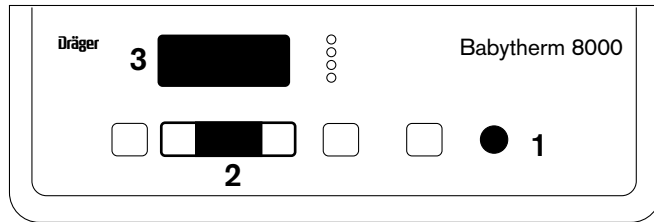
- | | |
|---|---|
| <p>1 Button for extending range of settings to temperatures from 30 °C to 38.5 °C.</p> <p>2 Display of mattress set temperature; to the left of display: button for decreasing set temperature, to the right of display: button for increasing set temperature.</p> <p>3 Mute button for silencing intermittent audible alarm for 15 minutes; Yellow LED in button lights up while intermittent audible alarm is silenced.</p> <p>4 Button for checking function of LEDs, displays and audible alarm.</p> | <p>5 Power switch</p> <p>6 Display of actual (measured) mattress temperature.</p> <p>7 Red LED ; lights up in case of power failure.</p> <p>8 Red LED 40 °C; flashes when measured mattress temperature exceeds 40 °C.</p> <p>9 Red LED ±1 °C; flashes when measured mattress temperature deviates more than ±1 °C from set value.</p> <p>10 Red LED Inop; lights in case of unit malfunction.</p> |
|---|---|

Mattress Heater Alarms

<p>±1 °C alarm Red LED ±1 °C (Pos. 4) flashes, actual value display flashes, intermittent audible alarm.</p> <p>40 °C alarm Red LED 40 °C (Pos. 8) flashes, actual value display flashes, continuous audible alarm.</p> <p>Power failure Red LED (Pos. 7) lights up, continuous audible alarm.</p> <p>Inoperable device Red LED Inop (Pos. 10) lights up. Err appears on actual value display alternately with measured value. Error code is flashing in set value display, continuous audible alarm.</p>	<p>Sensor alarm 3 flashing dashes »-- --« in the middle of the actual value display (Pos. 6).</p> <p>Battery alarm Acc appears on actual value display (Pos. 6) alternately with measured value. Intermittent audible alarm.</p>
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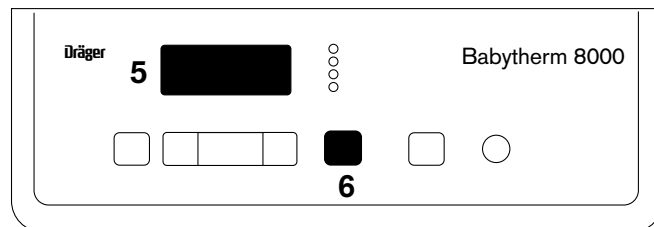
Switching heater unit on and activating self-test

- 1 Press power switch until it engages = ON.
A microprocessor self-test now checks proper function of the unit.
 - All LEDs light up; the numeric display shows **88.8**, and an audible alarm will be heard.
- 2 After approximately 2 seconds, the unit shows the default set temperature of 37.0 °C (display blinking).
- 3 The display alternates between **SET** = "Set value" and measured temperature.
- 4 Press button  or  briefly to adopt the default value as set value.
- 3 Display now continuously shows the measured mattress temperature.




- 5 In case of the display alternating between **Batt** = "rechargeable battery" and measured temperature with a simultaneous intermittent audible alarm, this means that **the power failure alarm battery is not charged sufficiently**.

After approximately 30 minutes of operation, the battery will be fully charged. The display will then show the measured temperature continuously without an audible alarm.

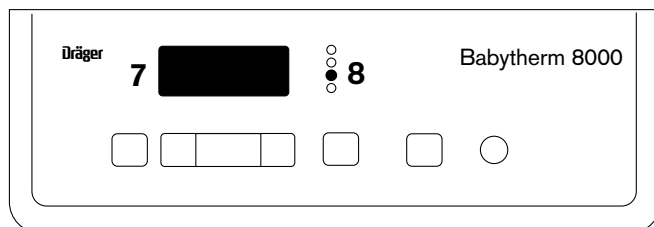


To mute the audible alarm:

- 6 Press alarm silence button , its yellow LED will light up.
An intermittent audible alarm can be silenced for 15 minutes.

In case of

- 7 display alternating between **Err** and measured temperature, and
 - 8 illuminated red **Inop** LED
- unit inoperative:** see p. 33 for troubleshooting.



Checking LEDs, displays and audible alarm:

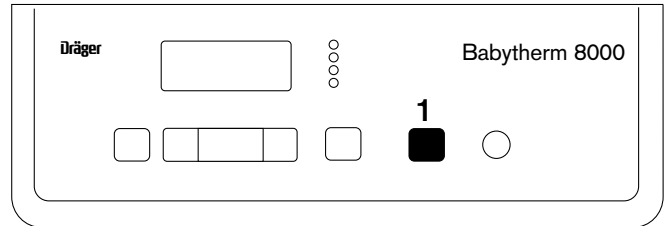
1 Press  button:

All LEDs light up for approximately 2 seconds; the numeric display shows **88.8**, and an audible alarm is generated.

After that, displays and LEDs go dark and the audible alarm goes off. After 2 seconds, temperature is displayed again.


NOTE: This function check is possible during operation without affecting any of the settings.

- Perform check at least once daily.

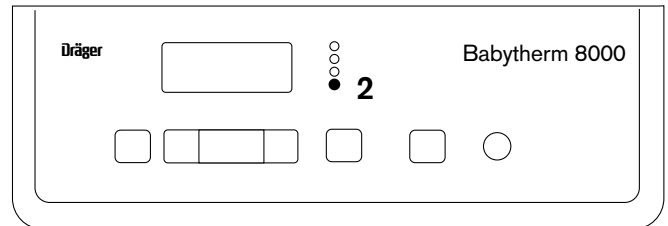


Checking power failure alarm

- Pull power plug from outlet.

2 Red LED  lights up and continuous audible alarm is generated.

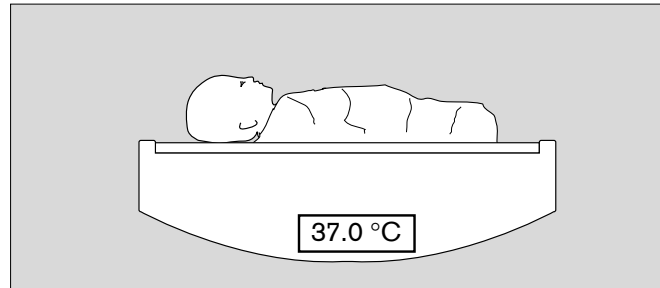
- Reconnect power plug.
Unit continues to operate with set values from **prior** to power failure alarm.



Operation

Operation without Concurrent Use of a Radiant Warmer Heater Operation

Operation without Concurrent Use of a Radiant Warmer



Heater Operation

- Heat up mattress to 37 °C. Allow approximately 1 hour for thorough warm-up. During warm-up and in standby mode, cover the gel mattress with a blanket.
- Place patient on the gel mattress. Delete, which is covered with a thin sheet.

CAUTION !

Always use a thin sheet to cover the mattress. Dräger sheet with thermo tiger pattern available under part number 2M 21 272.

WARNING !

Do not obstruct conductive heat transfer by blankets or other insulating covers placed underneath the patient,

With no radiant heater in use:

- Cover patient with a blanket.



WARNING !

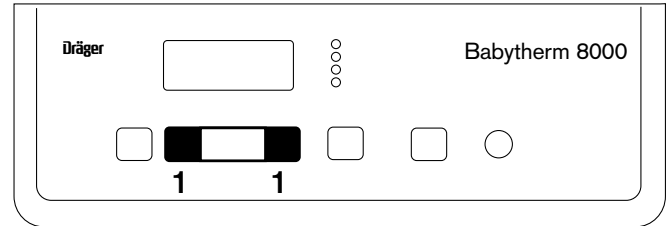
Do not switch off mattress heater while a baby is lying on the gel mattress as this will result in cooling patient.

Setting a Mattress Temperature

Temperature can be varied in steps of 0.1 degree Celsius.

Setting the temperature in the **normal range (35 °C to 37 °C):**

- 1 Press and hold down button  or , until desired temperature is showing on the display.







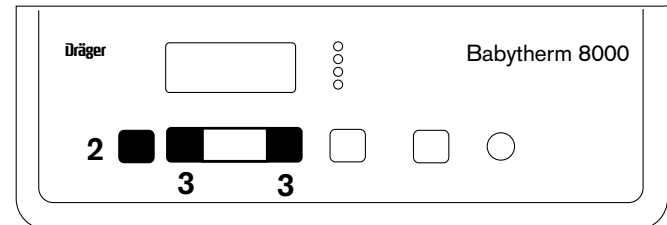
Setting temperature **outside** of the normal range:

- extended lower range: **30 °C to 35 °C**,
- extended upper range: **37 °C to 38.5 °C**.

WARNING !

Set temperatures in the lower extended temperature range only on the order of a physician. Watch patient particularly carefully!

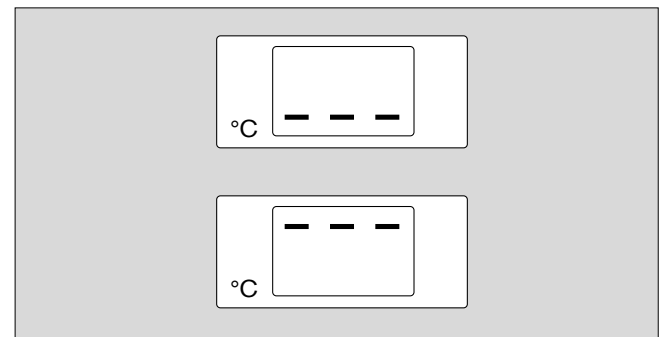
- 2 Press the unlocking button , the yellow LED in the button is lit.
 - 3 Hold down the  or  key, until desired temperature is showing on the display.
- Within 1 minute, input a temperature above 37 °C or below 35 °C.
- Otherwise, the LED in the  button will go off and the extended temperature ranges will be locked again.



When the temperature is outside a range from 5 °C to 45 °C:

- three lines in the **bottom** of the display = the temperature is below 5 °C
- three lines in the **top** of the display = the temperature is above 45 °C

NOTE: This may occur e. g. when the Babytherm 8000 WB is stored in ambient conditions beyond the range of 5 to 45 degree Celsius.

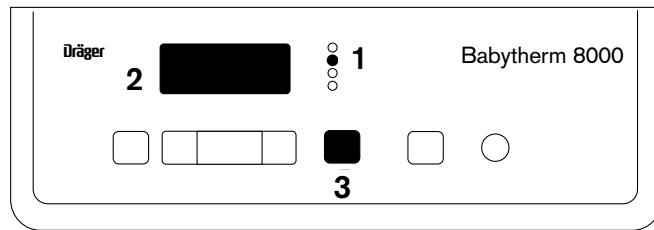


Heater Alarms


Deviation from set temperature

In case of deviations greater than ± 1 °C between actual and set mattress temperature:

- 1 The red LED ± 1 °C flashes and an intermittent audible alarm is generated, and
- 2 the display flashes.




The intermittent audible alarm can be silenced for approximately 15 minutes:

- 3 Press the  button, its yellow LED will light up.
- 1 The red LED is lit continuously.

When the actual mattress temperature has returned to a value within ± 1 °C of the set temperature:

- The red LED ± 1 °C and the intermittent audible alarm go off.

After the mattress heater is initially switched on:

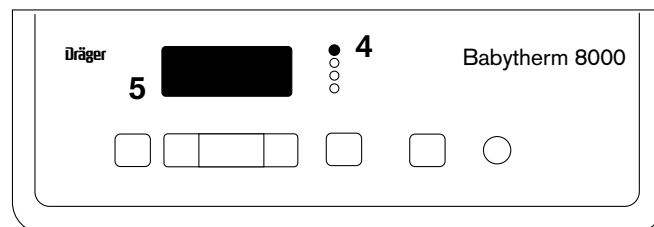
- The audible alarm is silenced for 1 hour (warm-up).
- 1 The red LED ± 1 °C is lit.
The yellow LED in the  button is lit.

40 °C alarm

- 4 The red LED 40 °C flashes, and a continuous audible alarm sounds.
- 5 The display flashes.

NOTE: The continuous alarm cannot be muted.

The alarm stops automatically when the temperature decreases.



Shut-Down

Only for equipment processing between patients.

- Press the power switch all the way = OFF,
then
- disconnect power plug from outlet.

NOTE: Observe specified sequence. Otherwise, the power failure alarm will be activated!

Notes on Mattress Heater Settings

Notes on settings assume use of the mattress heater without any additional radiant heat source.

For information on use of the Babytherm 8000 WB in the presence of radiant heater systems, see pages 26 ff.

WARNING !

Patient Temperature Monitoring
Check the baby's core temperature at regular intervals and adjust temperature setting to individual patient needs.

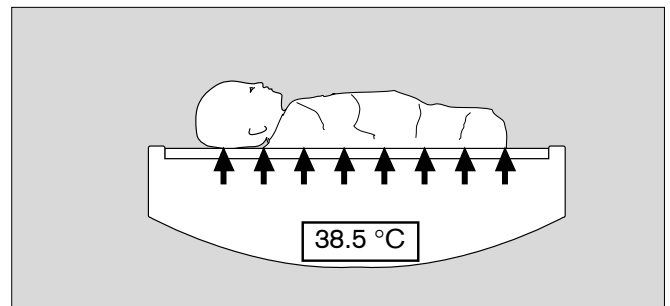
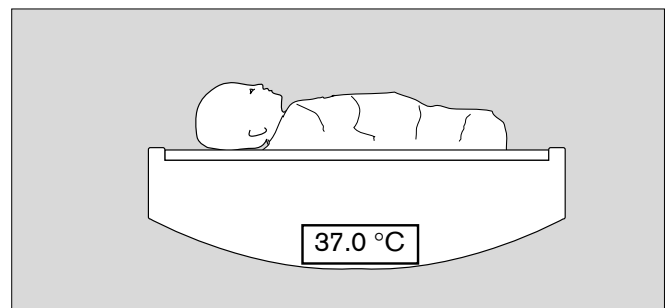
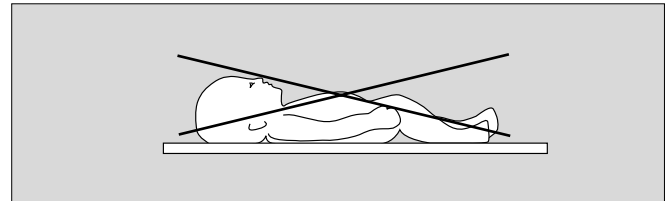
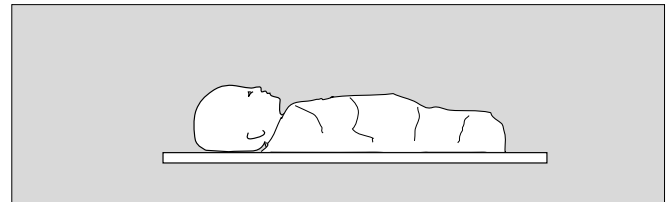
- Always cover patients, and/or dress them.

WARNING !

Do not obstruct conductive heat transfer by blankets or other insulating covers placed underneath the patient,

- To achieve a neutral balance (heat neither added nor dissipated):
set temperature to 37 °C.

- To add heat:
set temperature to, e. g., 38.5 °C.



Heat Therapy

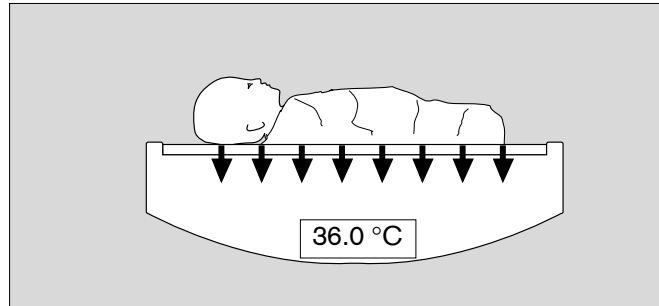
Notes on Mattress Heater Settings

Operation with Concurrent Use of a Radiant Heater

- To cool patient:
set temperature to, e. g., 36 °C.

WARNING !

Set temperatures in the lower extended temperature range only on the order of a physician. Watch patient particularly carefully!



Operation with Concurrent Use of a Radiant Heater

WARNING !

Dräger, Inc. cannot warrant or endorse the safe performance of third party radiant heaters for use with the Babytherm 8000 WB. Specifically, combinations with radiant warmers that are not intended for use with heated bassinets bear risks of excessive overall heat transfer to the patient.

We recommend contacting the manufacturers/distributors of third party radiant heater units regarding compliance of their product with heated bassinets before attempting to use them in conjunction with the Babytherm 8000 WB.

The following notes on settings of Babytherm 8000 WB in the presence of radiant heaters are intended as guidelines only and cannot take into consideration the specifics of individual radiant heater designs.

WARNING !

Phototherapy and the use of infant radiant heater warmers does increase the insensible water loss in infants. The baby's core temperature must be monitored particularly carefully during such treatments. The supply of fluids to the baby must also be increased in order to compensate for increased water loss.

WARNING !

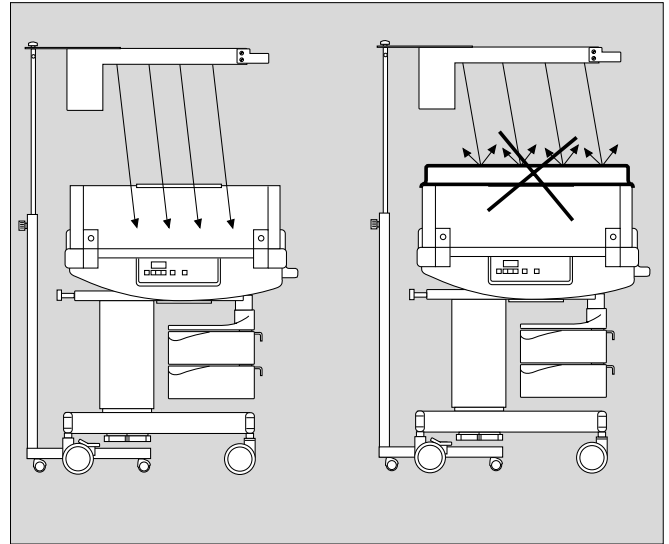
Patient Temperature Monitoring

Core temperature of the baby must be monitored particularly carefully during phototherapy or while a radiant warmer is used in conjunction with the Babytherm heated bassinet.

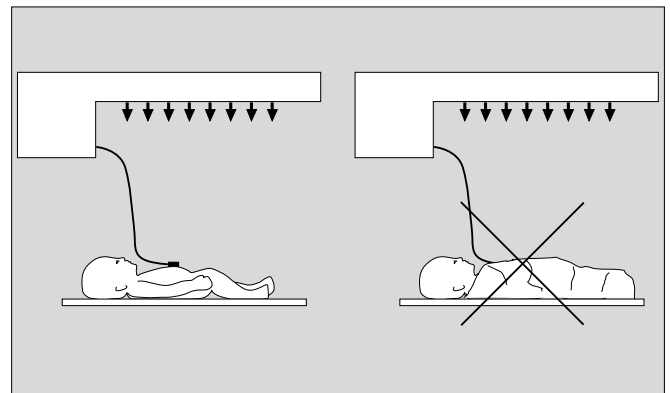
Adjust temperature settings to individual patient needs.

Skin temperature monitoring is no substitute for core temperature checks since the two parameters do not always closely correlate.

- Do not use the cover. Otherwise, a radiant heater will have no effect.

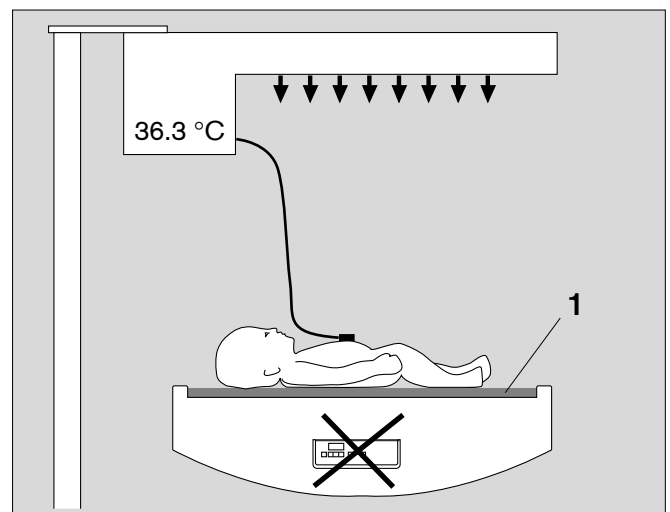


- Do not cover or dress patient.



Using a radiant heater without Babytherm mattress heating

- 1 Always use a foam rubber mattress!**
Do not use a gel mattress without mattress heating, or when mattress heating is switched off (see page 18)!



Heat Therapy

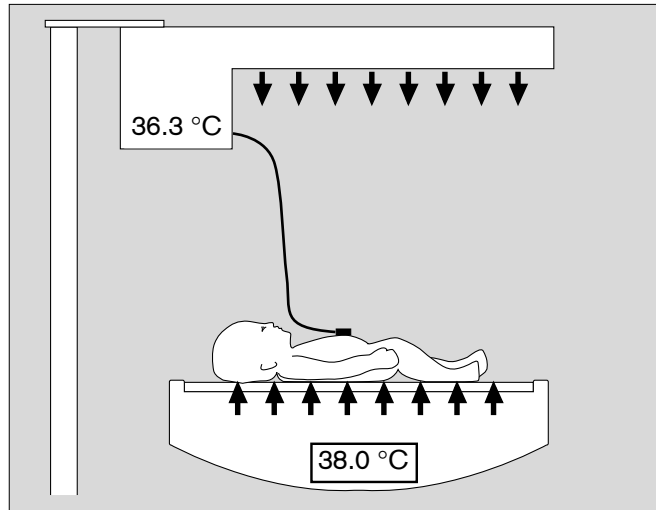
Operation with Concurrent Use of a Radiant Heater

Using radiant heaters and mattress heating with a gel mattress

- To add warmth from below, in addition to a radiant heater.

Set mattress heater temperature to, e. g., 38 °C,
and

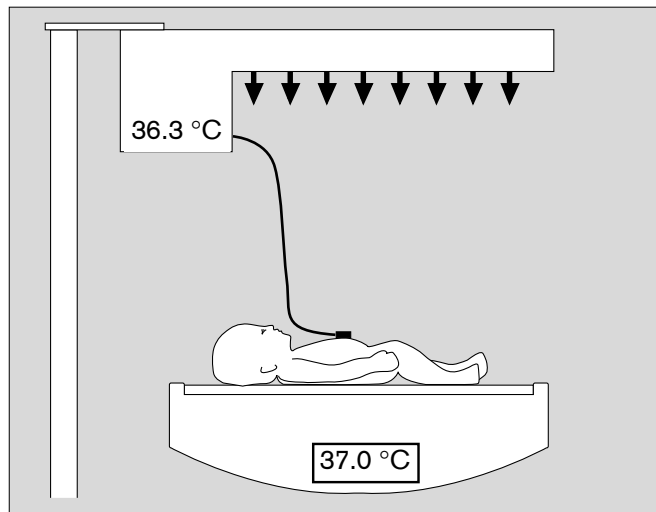
set skin temperature at the radiant heater to, e. g.,
36.3 °C.



- To achieve a neutral balance:

Set mattress heater temperature to 37 °C,
and

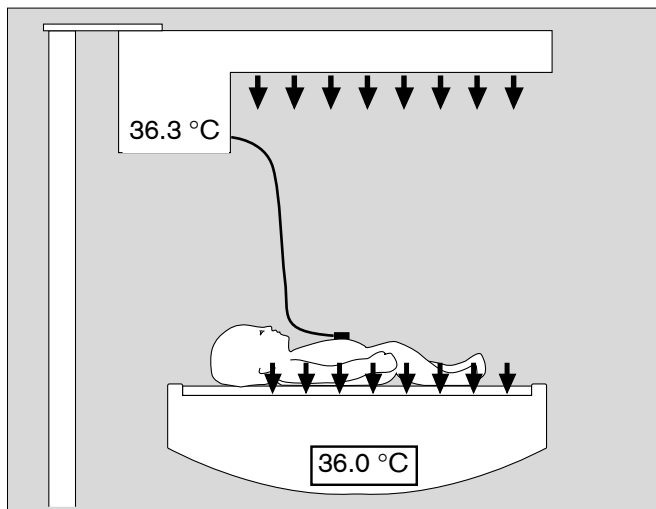
set skin temperature at the radiant heater to, e. g.,
36.3 °C.



- To cool the patient from below:

Set mattress heater temperature to, e. g., 36 °C,
and

set skin temperature at the radiant heater to, e. g.,
36.3 °C.



Taking X-Rays

- Place x-ray film cassette directly under patient (above mattress).
- Position the X-ray equipment above Babytherm 8000 WB.

If a radiant heater is in use:

- Swivel radiant heater to the side or move radiant heater stand.
- After finishing with x-rays, swivel radiant heater back over the patient.

Care

The Babytherm 8000 WB heated bassinet must be thoroughly cleaned and disinfected after each patient, or at least once a week. Perform any disinfection procedures according to established hospital procedures as well as to the following additional instructions.

WARNING !

Always follow accepted hospital procedures for handling equipment contaminated with body fluids.

Before any cleaning procedures, the bassinet must first be partially disassembled. For the cleaning and disinfecting of accessories, see their respective Operating Instructions.

Disassembly

- Switch off the device(s), pull power plug, and turn off all pressurized oxygen and air if used.

WARNING !

Always disconnect power supply before cleaning and disinfecting.

- Remove any ancillary patient care equipment from unit.
- Remove mattress from bed.
Store the mattress flat only.

CAUTION !

Do not fold gel mattress!

- Take off flexible U-grommets.

Cleaning / Disinfecting / Sterilizing

CAUTION !

Certain components of the bassinet consist of materials that are sensitive to certain organic solvents sometimes used for cleaning and disinfecting (e. g., alcohols, phenols, halogen releasing compounds, oxygen releasing compounds, strong organic acids, etc.). Exposure to such substances may cause damage that is not always immediately recognized. Sterilization of the bassinet itself with ethylene oxide (EtO) is also not recommended.

To prevent any damage, we recommend that only detergents and disinfectants are used that are compatible with the materials used in the bassinet and its components and accessories, e. g. surface disinfectants on the basis of

- aldehydes, or
- quaternary ammonium compounds

for disinfection procedures

Ensure that all disinfectants are registered with the U.S. Environmental Protection Agency for use as intended. Always follow the instruction labels specifically with respect to prescribed concentrations and the necessary exposure times.

Cleaning and Disinfection Procedures

- **Bassinet, inside and outside**
 - **surrounding panels, inside and outside**
 - **resting surface**
 - **perspex cover**
 - **mattress;**
 - **chassis, including attachments**
- Remove visible impurities with a disposable cloth wetted in a detergent.
 - Wipe-disinfect surfaces.
 - Wipe and dry with a clean, damp cloth.
- **Silicone U-grommets**
 - Wash with a detergent and rinse with clear water.
 - Bath disinfect parts. Then rinse in clear water and dry;
- or
- sterilize at 120 °C (248 °F).

CAUTION !

Do not launder mattresses in an automatic washing machine. Do not autoclave mattresses

CAUTION !

Do not expose Babytherm 8000 WB to high level of ultraviolet radiation. It may cause cracks in the PMMA (perspex) parts.

Before Next Use

- Reassemble components.
- Following wipe disinfection, operate unit for a few hours without a patient, in order to eliminate any disinfectant residues (at mattress temperature setting of 37 °C).

Before a patient is placed in the Babytherm 8000 WB:

- Set up accessories for therapy as needed.
- Check operational readiness, see pages 16 and 18.
- Verify that mattress is sufficiently preheated.

Inspection and Maintenance

WARNING !

To avoid any risk of infection, clean and disinfect bassinet and accessories before any maintenance according to established hospital procedures – this applies also when returning units or parts for repair.

WARNING !

Always disconnect supply before servicing.

WARNING !

Never operate the heated bassinet if it has suffered physical damage or does not seem to operate properly. In this case always refer servicing to properly trained and factory authorized service personnel.

Replacement of Parts

- | | |
|---------------------|---|
| Gel mattress | Cover small cuts or other damages in the film with adhesive tape. |
| Silicone U-grommets | Replace when brittle or sticky. |



Preventive Maintenance Intervals

WARNING !

Preventive Maintenance work on the Babytherm 8000 WB ventilator may be performed by trained and factory authorized staff only.

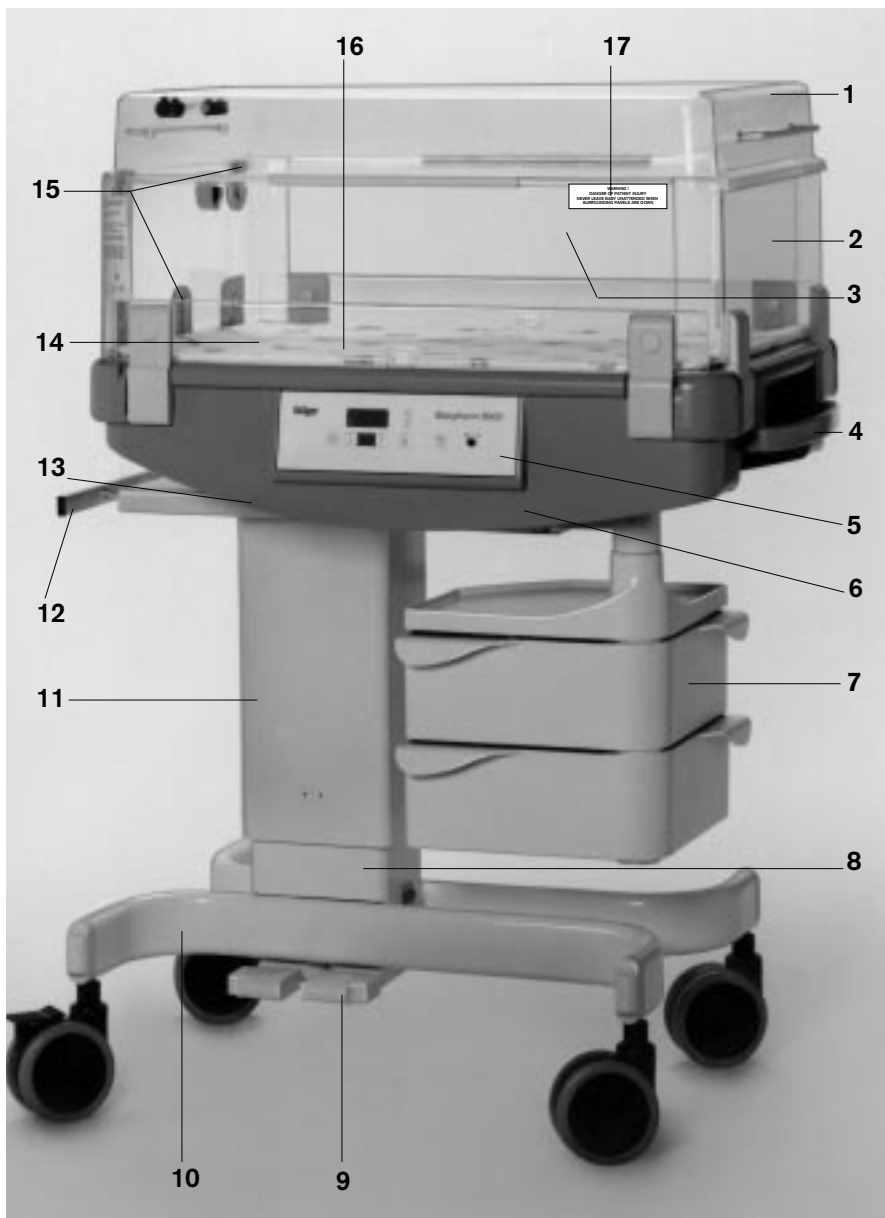
- | | |
|---------------------------------------|----------------------|
| Inspection and Preventive Maintenance | every six (6) months |
| Regular safety checks | every six (6) months |

Mattress Heater

Problem/Message	Likely Causes	Remedy
Red LED ± 1 °C flashes, actual value display flashes, intermittent audible alarm.	Measured mattress temperature deviates from set temperature by more than ± 1 °C.	During operation with radiant heater: reduce radiant heater output.
Red LED 40 °C flashes, actual value display flashes, continuous audible alarm.	Mattress temperature >40 °C	During operation with radiant heater: reduce radiant heater output.
Red LED  lights up, continuous audible alarm.	No electrical power	Check power connection Check that line power is not interrupted. Call DrägerService.
Red LED Inop lights up. Err appears on actual value display alternately with measured value. Error code is flashing in set value display, continuous audible alarm.	Device malfunction	Call DrägerService.
3 flashing dashes »-- --« in the middle of the actual value display.	Defective temperature sensors	Call DrägerService.
Acc appears on actual value display alternately with measured value. Intermittent audible alarm.	Backup battery for power failure alarm is not charged sufficiently.	Operate device for 30 minutes, Press button  , audible alarm will be silenced for 15 minutes.

Height Adjustment (Option)

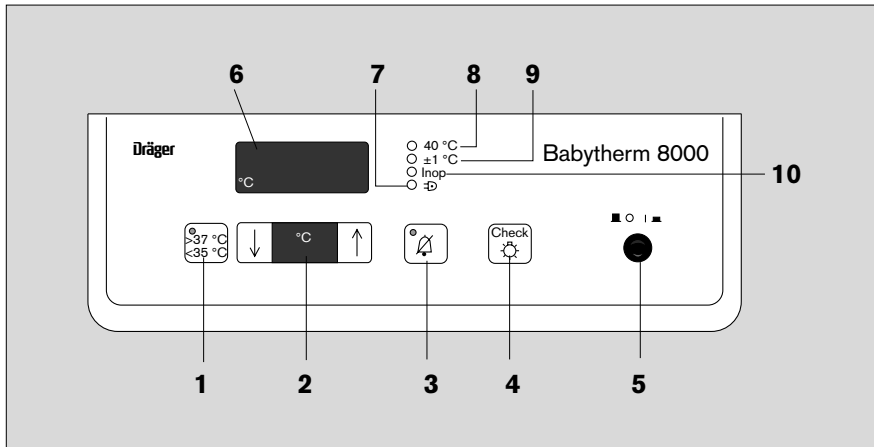
Problem/Message	Likely Causes	Remedy
Height adjustment does not work.	Motor over-temperature switch was activated.	Let cool off for approximately 15 minutes.




Overview

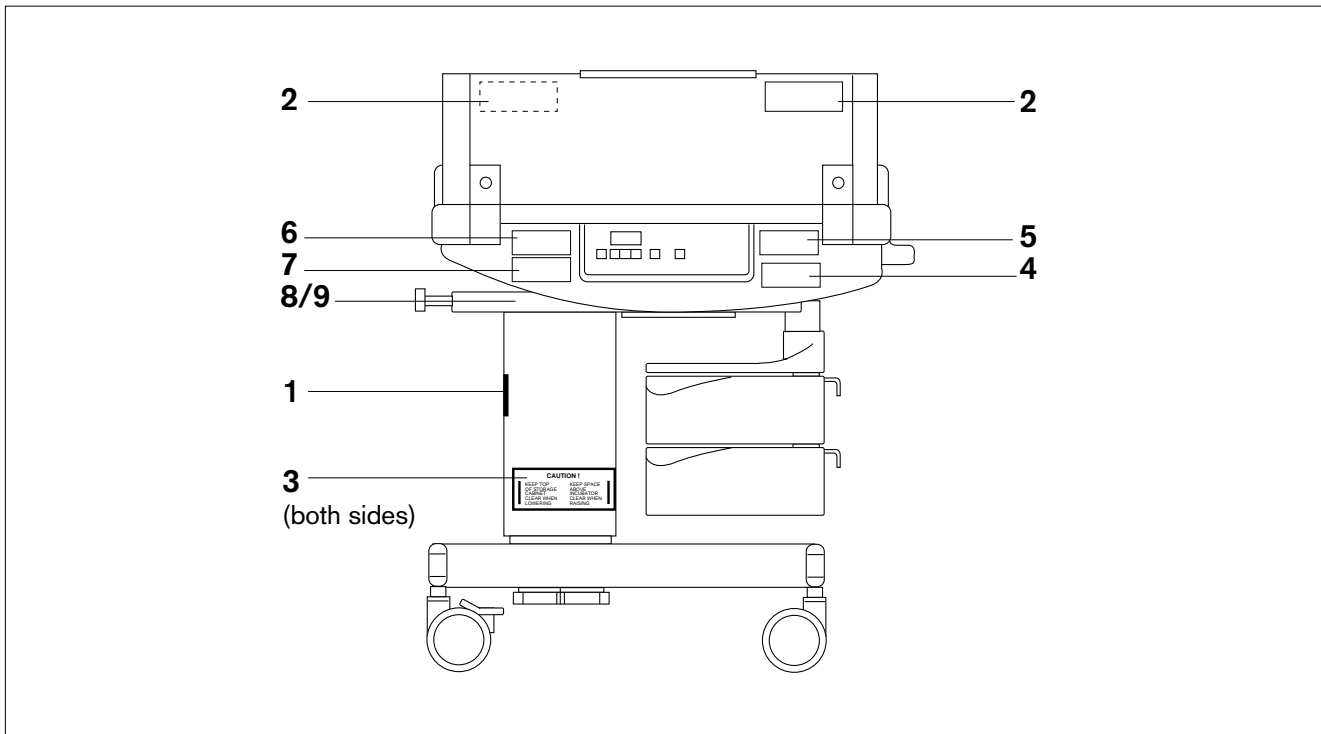
- | | | | |
|---|---|----|--|
| 1 | Cover | 10 | Chassis with 4 castors, 2 of which can be locked |
| 2 | End panel | 11 | Main WARNING/CAUTION label |
| 3 | Side panel | 12 | Accessory mounting rail |
| 4 | Handle with inner unlocking handle for tilting the cot | 13 | Inner rail with hook for drainage canister |
| 5 | Mattress heater control panel | 14 | Inner panels, 2 ea., (option) |
| 6 | Bassinet | 15 | Silicone U-grommets |
| 7 | Swivel cabinet (option) | 16 | Gel mattress for use with mattress heater;
foam rubber mattress for use without mattress heater |
| 8 | Column (showing with optional electric height adjustment) | 17 | Warning label "Never leave baby unattended..." |
| 9 | Foot controls, for optional electric height adjustment | | |

Operating Instructions Babytherm 8000 WB



Mattress Heater Control Panel

- | | |
|---|---|
| <p>1 Button for extending range of settings to temperatures from 30 °C to 38.5 °C.</p> <p>2 Display of mattress set temperature; to the left of display: button for decreasing set temperature, to the right of display: button for increasing set temperature.</p> <p>3 Mute button for silencing intermittent audible alarm for 15 minutes; Yellow LED in button lights up while intermittent audible alarm is silenced.</p> <p>4 Button for checking function of LEDs, displays and audible alarm.</p> | <p>5 Power switch</p> <p>6 Display of actual (measured) mattress temperature.</p> <p>7 Red LED  ; lights up in case of power failure.</p> <p>8 Red LED 40 °C; flashes when measured mattress temperature exceeds 40 °C.</p> <p>9 Red LED ±1 °C; flashes when measured mattress temperature deviates more than ±1 °C from set value.</p> <p>10 Red LED Inop; lights in case of unit malfunction.</p> |
|---|---|



Labels

1 Main WARNING/CAUTION label

DANGER !

RISK OF EXPLOSION IF USED IN THE PRESENCE OF FLAMMABLE ANESTHETICS

WARNING !

DISCONNECT SUPPLY BEFORE SERVICING

REPAIRS ON THIS EQUIPMENT TO BE PERFORMED ONLY BY DrägerService OR ITS AUTHORIZED SERVICE CENTERS

CAUTION !

TO MAINTAIN GROUNDING INTEGRITY, CONNECT ONLY TO A "HOSPITAL GRADE" RECEPTACLE

TO REDUCE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER

FEDERAL (USA) LAW RESTRICTS THIS DEVICE TO SALE BY OR ON THE ORDER OF A PHYSICIAN

2 Side panel WARNING labels

WARNING !

DANGER OF PATIENT INJURY

NEVER LEAVE BABY UNATTENDED WHEN SURROUNDING PANELS ARE DOWN

3 Height adjustment CAUTION labels

CAUTION !

↓

KEEP SPACE BELOW CABINET CLEAR WHEN LOWERING

↑

KEEP SPACE ABOVE BASSINET CLEAR WHEN RAISING

4 Mattress heater WARNING label

WARNING !

DO NOT SWITCH OFF MATTRESS HEATING WHILE A BABY IS LYING ON THE GEL MATTRESS AS THIS WILL RESULT IN COOLING OF THE PATIENT

5 Mattress WARNING label

WARNING !

USE RUBBER MATTRESS WHEN THE HEATING MATTRESS IS COLD. GEL MATTRESS WILL COOL THE INFANT IF MATTRESS HEATING IS SWITCHED OFF

6 Baby's temperature WARNING label

WARNING !

CHECK BABY'S TEMPERATURE AND SKIN CONDITION AT REGULAR INTERVALS AND ADJUST TEMPERATURE SETTING TO INDIVIDUAL PATIENT NEEDS

7 Radiant warmer WARNING label

WARNING !

WHEN USED WITH THE RADIANT WARMER CHECK ITS OPERATORS MANUAL FOR DIRECTIONS OF THE CORRECT HEAT LEVEL AND DISTANCE TO THE BABY

8 Type label, Dräger Inc.

Dräger, Inc.
Critical Care Systems
 3136 Quarry Rd
 Telford, PA 18969
 Tel: (703) 817-0100
 Fax: (703) 817-0101

8 Type label, Dräger Medizintechnik GmbH

Babytherm 8000

Typ _____	<input type="checkbox"/>
Fabr. Nr. _____	
V _____	
A _____	
Hz 50/60 _____	


Made in Germany
Dräger Medizintechnik GmbH

Technical Data

Ambient conditions

For operation:	
Temperature	20 °C to 30 °C
Atmospheric pressure	900 hPa to 1100 hPa
Relative humidity	0 to 90%, no condensation
In storage:	
Temperature	-20 °C to 60 °C
Atmospheric pressure	750 hPa to 1100 hPa
Relative humidity	0 to 90%, no condensation

Electrical safety

Standard	IEC 601-1 corresponding to DIN VDE 750 Part 1
Protection class	I
Heating surface of mattress	 Type BF

RFI suppression

in agreement with EN 55011: 1991 / EN 55014: 1993; VfG 293/1991; guideline 89/336/EWG

Mattress heating

Line voltage	120 V; 60 Hz
Power consumption	160 VA
Heating output	120 W
Fuses	T 1.6 A L 250 V; IEC 127-2/III (two)
Temperature measurement	
Measurement range	5 °C to 45 °C
Accuracy	±0.5 °C
Setting range	30 °C to 38.5 °C
Heating surface	Type BF

Height adjustment (option)

Line voltage	120 V; 60 Hz
Power consumption	560 W
Fuses	T 3.15 A L 250 V; IEC 127-2/III (two)
Additional height range	295 mm
Operation	Maximum operating time of 1 min must be followed by 60 min cooling time.

Dimensions

Length x Width	940 x 620 mm (37,0 x 24,4 inches)
Total height (with cover)	
basic unit without height adjustment	1285 mm (50,6 inches)
basic unit with height adjustment	1220 to 1515 mm (48,0 to 59,6 inches)
Working height of the bed surface	
without height adjustment	950 mm (37,4 inches)
with height adjustment	885 to 1180 mm (34,8 to 46,5 inches)
bed size	750 x 490 mm (29,5 x 19,3 inches)
Tilting of bed	adjustable in microsteps maximum of 20 °C down maximum of 15 °C up
Height of surrounding panels	230 mm or 150 mm (9,1 or 5,9 inches)
Height of inside panels	70 mm (2,8 inches)

Weight (with cabinet and cover)

basic unit without height adjustment	85 kg (187 lbs)
basic unit with height adjustment	83 kg (183 lbs)

Ordering Information

Name and Description	Part No.	Name and Description	Part No.
Babytherm 8000 WB Voltage level as ordered To be specified with order: <ul style="list-style-type: none"> – Cover or no cover – Set of side panels, height 230 mm or set of side panels, height 150 mm – 2 inner panels or no inner panels – Mattress heater with gel mattress or foam rubber mattress, unheated – height adjustable column or fixed column – Swivel cabinet or no swivel cabinet 	FR 00 050	Consumables Foam rubber mattress for unheated bassinet Gel mattress for use with mattress heater Mattress cover Silicone U-grommet	2M 21 012 2M 20 827 2M 21 272 2M 20 434
Options (can be retrofitted) Panels <ul style="list-style-type: none"> Set of side panels, height 230 mm Set of side panels, height 150 mm Inner panel, height 70 mm Swivel cabinet Cabinet installation hardware Perspex Cover 	2M 21 034 2M 21 032 2M 20 936 2M 20 638 2M 20 868 2M 21 030	Documentation Service Manual	on request
Accessories Infusion bottle holder Inner rail, additional for drainage canister Holder for perspex cover	2M 16 520 2M 21 150 2M 21 342		

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This Operating Instruction Manual
applies only to
Babytherm 8000 WB (FR 00 050) or
**Babytherm 8000 OC without
radiant warmer** (FR 00 048)
with Serial No.:

Without entry of a Serial No. by Dräger,
these Operating Instructions provide
general information only and are not
intended for use with a specific device!

Manufactured by

Dräger Medizintechnik GmbH

Germany

🏠 Moislinger Allee 53 – 55
D-23542 Lübeck

☎ (4 51) 8 82 - 0

📠 26 80 70

FAX (4 51) 8 82-20 80

Distributed by

Dräger Inc.

Critical Care Systems

🏠 3136 Quarry Road
Telford, PA 18969

☎ 215-721-6910

FAX 215-721-6915

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