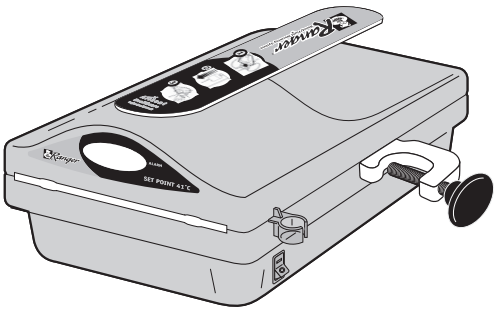
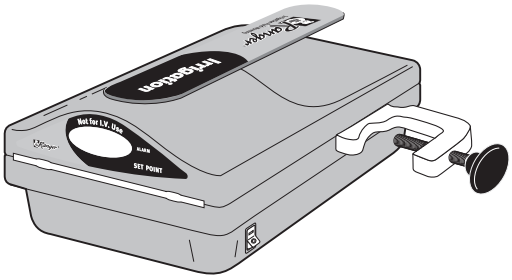


3M Ranger™ Model 245

Blood/Fluid Warming System

For I.V. Use



3M Ranger™ Model 247

Irrigation Fluid Warming System

Not for I.V. Use

(GB) Model 245 • Blood/Fluid Warming System • For I.V. Use

(DE) Modell 245 • Blut- und Infusionswärmesystem • Für intravenöse Anwendungen

(FR) Modèle 245 • Système de réchauffement de sang/soluté • Pour perfusion I.V

(GB) Model 247 • Irrigation Fluid Warming System • Not for I.V. Use

(DE) Modell 247 • Spülflüssigkeit-Erwärmungssystem • Nicht zum intravenösen Gebrauch

(FR) Modèle 247 • Système de réchauffement de liquide d'irrigation • Ne pas utiliser pour une perfusion I.V

Bair Hugger™ Ranger™

Blood and Fluid Warming Systems

Table of Contents

Technical Service and Order Placement

Technical Service

Arizant Healthcare Inc.

TEL: +1-952-947-1200
+1-800-733-7775
FAX: +1-952-947-1400

Arizant UK Limited

TEL: +44-1924-200-550
FAX: +44-1924-200-518

Arizant Deutschland, GmbH

TEL: +49-4154-9934-0
FAX: +49-4154-9934-20

Arizant France, SAS

TEL: +33 4 42 98 14 00
Indigo (in France only): 0 820 33 90 40
FAX: +33 4 42 98 14 01

Order Placement

USA

TEL: +1-952-947-1200
+1-800-733-7775
FAX: +1-952-947-1400
+1-800-775-0002

In-warranty Repair and Exchange

Replacement parts to correct a problem are delivered at no charge. To return a device to Arizant Healthcare Inc. for service, first obtain a Return Authorization (RA) number from a customer service representative. Please use the (RA) number on all correspondence when returning a device for service. A shipping carton will be delivered to you at no charge, if needed. We will service and ship your device within five (5) working days of our receipt. Call your local supplier or sales representative to inquire about a loaner device while your device is being serviced.

When You Call for Technical Support

Remember, we will need to know the serial number of your unit when you call us. The serial number label is located on the bottom of the warming unit.

Initial Equipment Check

- Make sure the 3M™ Ranger™ unit's power cord is plugged into the unit.
- When checking for grounding, clamp to the screw threads on the unit's I.V. pole clamp or the equipotential stud on the rear of the unit. Clamp should be tightened securely.
- Sometime during shipping, this unit may have been exposed to extreme temperatures. The unit may need a period of 20 minutes or more to return to normal operating temperature. Store the Ranger unit at room temperature, allowing it to equilibrate, before using or testing the unit.

Introduction

The Ranger warming system includes a warming unit and a disposable administration set. The Ranger warming unit is designed to be mounted to an I.V. pole. A handle located on the top of the unit makes transport easy. When mounted to the I.V. pole, the unit fits easily above the 3M™ Bair Hugger™ 500 or 700 series warming unit.

Model 245 Blood/Fluid Warming System

The Ranger blood/fluid warming system is designed to warm blood, blood products, and liquids and deliver these at flow rates from KVO to 500 mL/min. At these flow rates, the device maintains fluid output temperatures ranging from 33°C to 41°C (Note: This is for room temperature fluids only). It takes less than two minutes to warm up to the 41°C ±1 set point temperature. The alarm points on the Model 245 are 43°C ±1 and 46°C [+3, -2°C].

Disposable blood/fluid sets are available for standard flow, high flow, and pediatric applications. Disposable sets are sterile, latex-free, single-use-only items and are designed to be used with the reusable warming unit. Do not use other disposable sets with the Model 245, including those designed for the Model 247 irrigation warming system.

Model 247 Irrigation Warming System

The Ranger irrigation warming system is designed to warm irrigation fluids and deliver these at flow rates from 0 to 865 mL/min when the bag is hung 100 cm above the scope. At these flow rates, the device maintains fluid output temperatures ranging from 33°C to 41°C (Note: This is for room temperature fluids only). It takes less than two minutes to warm up to the 41°C ±1 set point temperature. The alarm points on the Model 247 are 48°C (±2) and 50°C (±2).

The Ranger irrigation fluid warming disposable set is sterile, latex-free, and is designed to be used with the reusable Ranger irrigation fluid warming unit. Do not use other disposable sets with the Model 247, including those designed for the Model 245 blood/fluid warming system.

Indications for Use

Blood/Fluid Warming System

The Ranger blood/fluid warming system is intended to warm blood, blood products, and liquids.

Irrigation Fluid Warming System

The Ranger irrigation fluid warming system is intended to warm irrigation fluids.

Warnings and Cautions

WARNING

- Electrical shock hazard. Do not open the warming unit case.
- Do not substitute other devices for the Ranger warming unit or Ranger disposable sets. Thermal or electrical injury or device damage may occur.
- Never infuse fluids if air bubbles are present in the fluid line as air embolism may result (Model 245 only).
- Do not continue use of the unit if the over-temperature alarm continues to sound and the temperature does not return to the set point temperature. Immediately stop fluid flow and discard the disposable set. Have the warming unit tested by a biomedical technician or call Arizant Healthcare Inc. Technical Service.
- Equipment not suitable for use in the presence of a flammable anaesthetic mixture with air or with oxygen or nitrous oxide.

CAUTION

- Model 247 is not for I.V. use.
- Do not immerse the fluid warming unit in liquids. Wipe with a clean, slightly damp cloth.
- To prevent tipping, clamp the Ranger warming unit to an I.V. pole with a minimum 14" (35.6 cm) radius wheelbase and at a height no higher than 44" (112 cm). Failure to do so may result in damage to the product or catheter site trauma.

NOTICES

- Federal law (USA) restricts this device to sale by or on the order of a licensed healthcare professional.
- To reliably ground the Ranger irrigation warming system, only connect to receptacles marked “Hospital Only” or “Hospital Grade”.

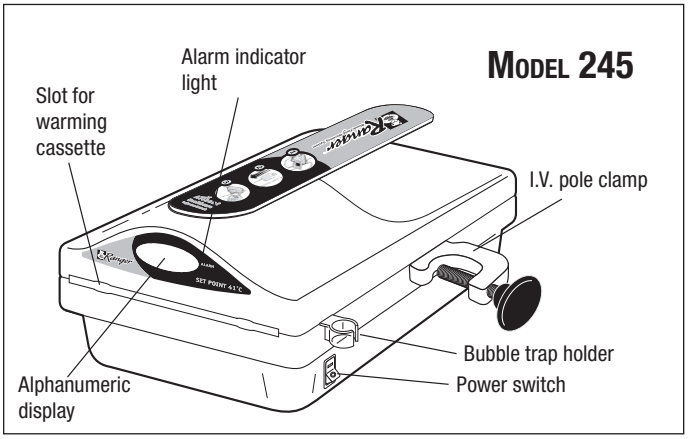
Before Servicing Equipment

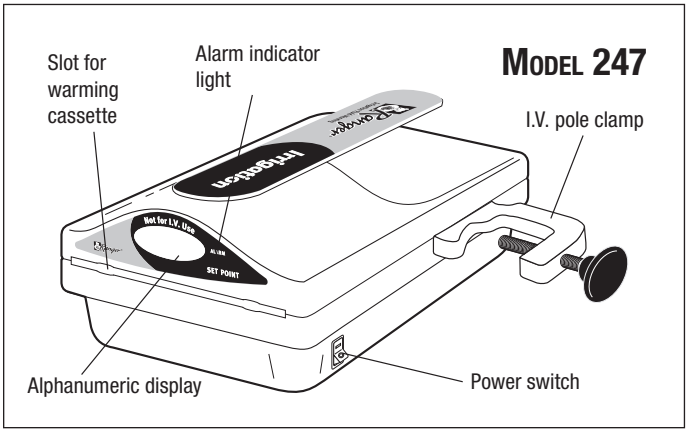
All repair, calibration, and servicing of this equipment must be performed by Arizant Healthcare Inc. or an authorized service technician. Arizant Healthcare Inc. assumes no responsibility for the reliability, performance, or safety of the equipment if:

- Modifications or repairs are performed by unauthorized personnel.
- The equipment is used in a manner other than that described in the operator’s manual.
- The equipment is installed in an environment that does not meet the appropriate electrical and grounding requirements.

Product Description

The Ranger fluid warming systems consist of a warming unit and a sterile disposable fluid warming cassette.





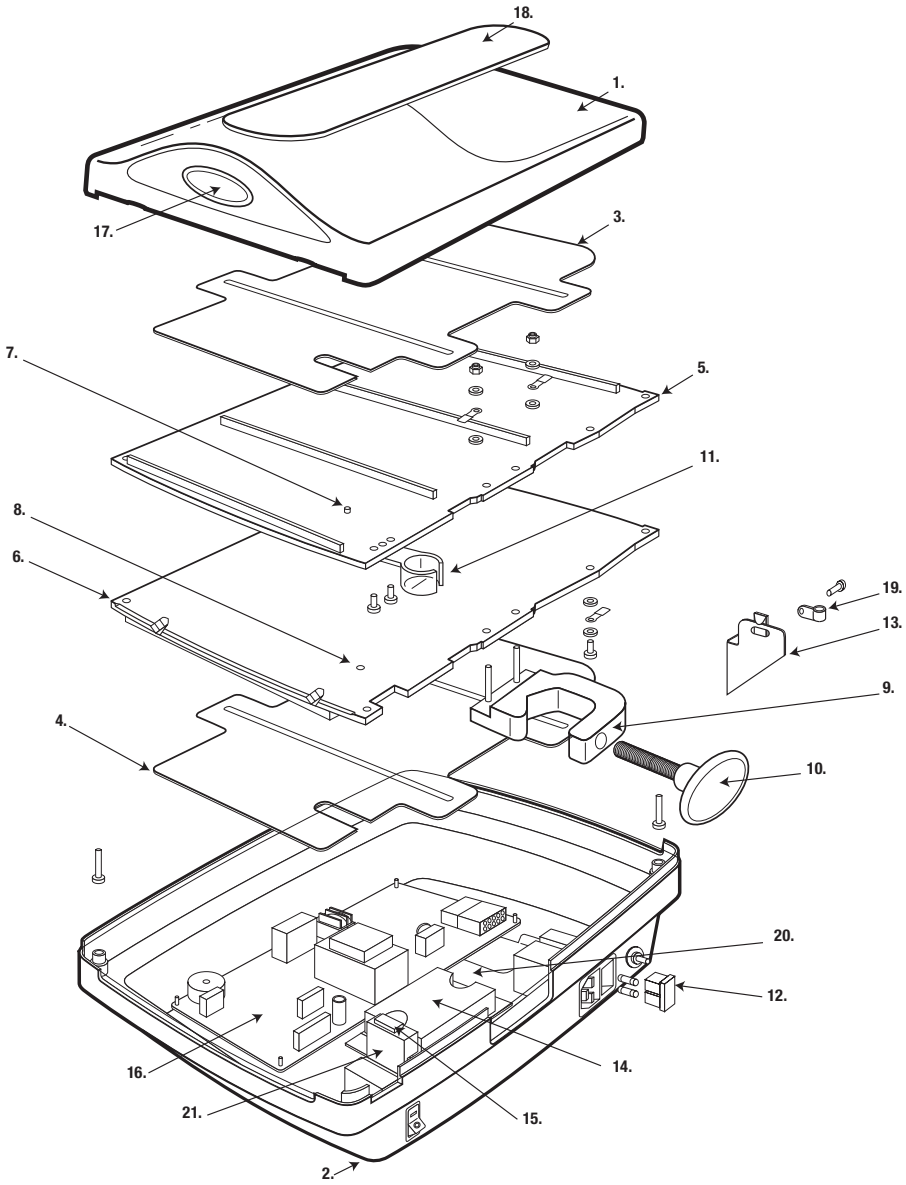
Ranger Warming Unit

The warming unit is a compact, lightweight, liquid-resistant device with a clamp located on the side for attachment to an I.V. pole. A carrying handle on the top of the unit makes it easy to transport.

Located on the front panel you will find:

- Alphanumeric display that indicates the heater temperature during normal operation. In an over-temperature condition, the display alternately flashes a temperature of 43°C for the Model 245 (48°C for the Model 247) or higher and the word "HI." In an under-temperature condition, the display alternately flashes a temperature of 33˚C or lower and the word "LO."
- Alarm indicator light that comes on when either an over- or under-temperature condition occurs.

Ranger Models 245 and 247



1. Upper Enclosure
2. Lower Enclosure
3. Upper Heater
4. Lower Heater
5. Upper Heater Plate
6. Lower Heater Plate
7. RTD Sensor
8. Thermistor Sensor
9. Pole Clamp
10. Pole Clamp Knob
11. Bubble Trap Holder (Model 245)
12. Power Entry Module
13. Cord Retainer
14. Solid State Relay
15. Microswitch
16. Alarm Board
17. Controller
18. Handle
19. Cable Clamp
20. Ground Plane
21. Heat Sink

Maintenance and Storage

Cleaning the Ranger Warming Unit

Clean the Ranger warming unit on an as-needed basis.

CAUTION

- Do not immerse the warming unit in cleaning or sterilizing solutions. The unit is not liquid-proof.
- Do not clean the warming unit with solvents or damage to the case, label, and internal components may result.

To Clean The Exterior Of The Warming Unit:

1. Disconnect the Ranger warming unit from the power source.
2. Wipe the outside of the unit with warm, soapy water, nonabrasive cleaning solutions, dilute bleach, or cold sterilants. Do not use abrasive materials.
3. Wipe with a dry, soft cloth.

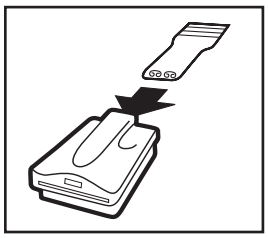
To Clean The Heating Plates:

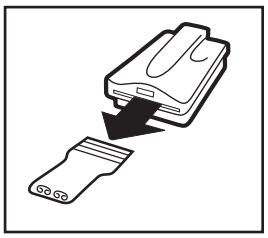
The Ranger cleaning tool (part #90030) is intended to clean both heating plates of the warming unit. It is not necessary to disassemble the warming unit to use the tool.

CAUTION

- Do not insert metallic instruments in the warming unit, as damage to the heating plates may occur.
- Do not use abrasive material or solutions to clean the heater plates.
- Do not allow spills to dry inside the unit, as this may make it more difficult to clean the unit.
- The cleaning tool provides only superficial cleaning—it does not disinfect or sterilize the interior of the unit.

METHOD





1. Unplug the warming unit.
2. Unfold the cleaning tool. Wet the foam pads with a nonabrasive solution, such as Alconox™ brand detergent.
3. Insert the tool from the back of the unit and pull the tool all the way out from the front.
4. Rinse the tool with water and repeat 3 times. Discard the tool according to institutional protocol.
5. Wipe off the unit to remove excess fluid.

TO CLEAN RESISTANT, DRIED-ON FLUIDS:

1. Spray a nonabrasive solution inside the slot of the warming unit and let sit for 15-20 minutes.
2. Clean the unit by using the cleaning tool.

NOTE: You may use a nonmetal instrument, such as a cotton swab, to clean the upper channels. If you are unable to adequately clean the unit, call Arizant Healthcare Inc. Technical Service.

Storage

Store all components in a cool, dry place when not in use.

Servicing

There are no user-serviceable parts in the Ranger warming unit. All service must be performed by Arizant Healthcare Inc. or an authorized service technician.

Call Arizant Healthcare Inc. Technical Service at 800-733-7775 or 952-947-1200 for service information.

Alconox is a trademark of Alconox, Inc.

Model 245 Blood/Fluid Warming System Preventative Maintenance Checklist

CAUTION

Temperature adjustments cannot be made to the Ranger warming unit. If the test shows the temperature is out of specification, please call Arizant Healthcare Inc. Technical Support at 1-800-733-7775.

Tools and equipment

- Thermocouple: 0.005" lead or smaller (part #90020)
- Calibrated thermocouple temperature monitor
- Aluminum tape
- Ranger standard flow warming set
- Phillips screwdriver
- Saline/water

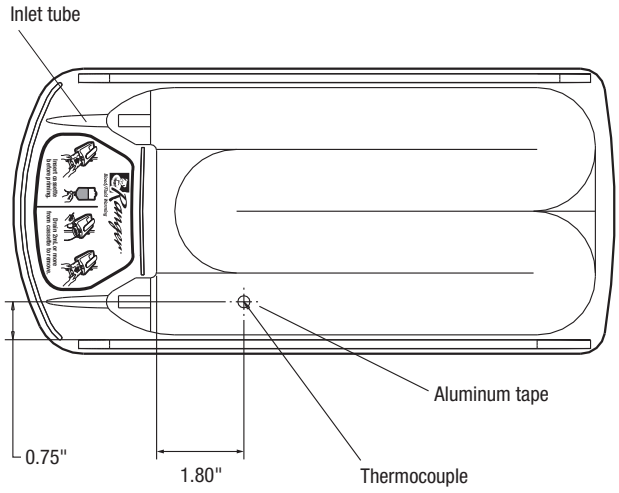


Fig. 1: Ranger standard fluid warming cassette

1. Use aluminum tape to affix a thermocouple to the top surface of the Ranger warming cassette as shown in Figure 1.
2. Slide the warming cassette into the slot of the Ranger warming unit.
3. Using room temperature saline/water, prime the cassette per instructions included with it.

   NOTE: To achieve correct results, fluids must be administered into the inlet tube, NOT into the outlet tube.
4. Close patient line with white clamp to stop flow.
5. Turn the Ranger unit ON and allow it to warm up for 5 minutes.
6. The Ranger unit display should read 41°C±1. Note the temperature on the thermocouple temperature monitor. If the temperature reading is not 41°C±1, call Arizant Healthcare Inc. Technical Support.

   NOTE: Most handheld temperature meters have a ±1°C tolerance.

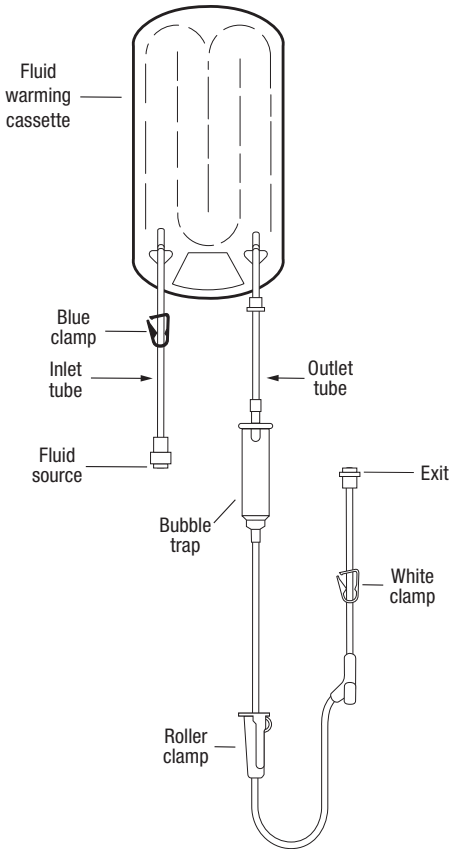


Fig. 2: Ranger standard flow warming set

Testing the Over-temperature Alarm Points (43°C [±1] and 46°C [+3, -2])

The over-temperature alarm test causes the Ranger unit to go into an over-temperature test mode by manually overriding the primary control system and engaging the heaters. The Ranger system is very responsive to heater input; therefore the test procedures are technique sensitive. Read instructions thoroughly before beginning these tests.

The first alarm point at 43°C (±1) alerts user to the rise in temperature (see step 7). At the 46°C (+3, -2) secondary alarm set point, the unit cuts power to the heaters (see step 8). Please note that due to the heaters' rapid response, you may see temperature readings drift within the range of 44-49°C.

7. Loosen the over-temperature screw on the bottom of the Ranger unit (see Fig. 3). Listen for a slight click as the microswitch opens. **Loosen ½ turn more.** This unit is now in over-temperature test mode, and the temperature output of the unit should begin to rise. When the Ranger display reads 43°C, verify that an audible alarm sounds, the alarm light illuminates, and the display alternately flashes "HI" and the plate temperature.

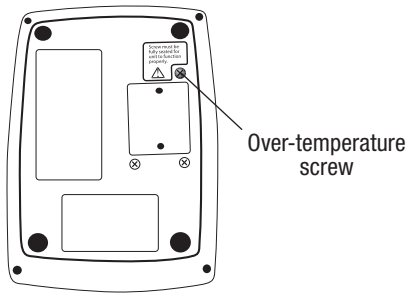


Fig. 3: Ranger over-temperature screw

8. Listen for the power relay to click at 46°C (+3, -2) (you can feel the click when holding the lower left corner of the unit as you face the front display). The click signifies the secondary alarm trip point and signals that power to the heaters has been shut off. The over-temperature alarm sounds, the alarm light illuminates, and the alphanumeric display alternately reads "HI" and the plate temperature. Watch the thermocouple temperature monitor to determine the unit's peak temperature output (less than 1 minute). The temperature reading on the monitor should peak at 46°C (+3, -2).

NOTE: If the temperature displayed on the thermocouple monitor exceeds 49°C during the test, tighten the over-temperature test screw on the bottom of the Ranger unit, unplug it, and run cold fluids through the warming cassette. This returns the unit to normal operating temperature. Call Arizant Healthcare Inc. Technical Support.

9. The secondary alarm is designed to latch. Verify this feature by momentarily turning off the power switch, then turning it on again. The Ranger unit should continue alarming throughout this sequence.

10. Securely tighten the over-temperature screw, turn off the Ranger unit, and unplug the unit. Once power is cut to the Ranger unit, the alarm will cease. The unit is ready to return to service after it cools to normal operating temperature (approximately 20-30 minutes).

Ranger Model 245 Maintenance Log

The operating temperature and alarms should be tested at least every 6 months or according to institutional protocol.

MAINTENANCE ACTION PERFORMED

MODEL ______________ SN __________

Date _________ **Operating temperature:** (Specification = 41°C±1) ______°C

Over-temperature alarm points:

Audible (43°C [±1] on Ranger unit display) ______°C
Secondary (46°C [+3, -2]) ______°C

Date _________ **Operating temperature:** (Specification = 41°C±1) ______°C

Over-temperature alarm points:

Audible (43°C [±1] on Ranger unit display) ______°C
Secondary (46°C [+3, -2]) ______°C

Date _________ **Operating temperature:** (Specification = 41°C±1) ______°C

Over-temperature alarm points:

Audible (43°C [±1] on Ranger unit display) ______°C
Secondary (46°C [+3, -2]) ______°C

Date _________ **Operating temperature:** (Specification = 41°C±1) ______°C

Over-temperature alarm points:

Audible (43°C [±1] on Ranger unit display) ______°C
Secondary (46°C [+3, -2]) ______°C

Date _________ **Operating temperature:** (Specification = 41°C±1) ______°C

Over-temperature alarm points:

Audible (43°C [±1] on Ranger unit display) ______°C
Secondary (46°C [+3, -2]) ______°C

Date _________ **Operating temperature:** (Specification = 41°C±1) ______°C

Over-temperature alarm points:

Audible (43°C [±1] on Ranger unit display) ______°C
Secondary (46°C [+3, -2]) ______°C

Model 247 Irrigation Fluid Warming System Preventative Maintenance Checklist

Caution

Temperature adjustments cannot be made to the Ranger irrigation warming unit. If the test shows the temperature is out of specification, please call Arizant Healthcare Inc. Technical Support at 1-800-733-7775.

Tools and equipment

- Thermocouple: 0.005" lead or smaller (part #90020)
- Calibrated thermocouple temperature monitor
- Aluminum tape
- Ranger irrigation warming set
- Phillips screwdriver
- Saline/water

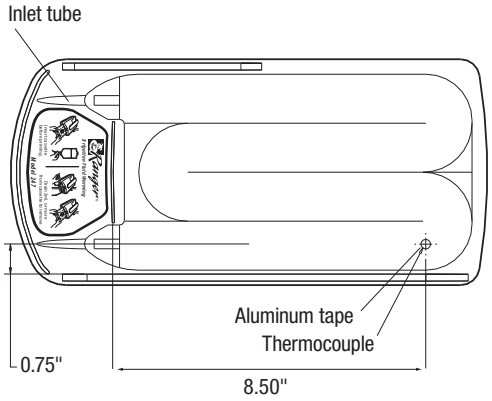


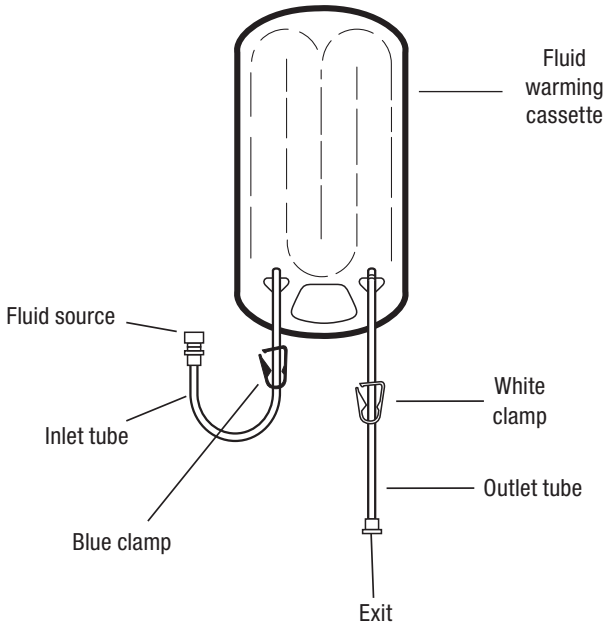
Fig. 1: Ranger irrigation fluid warming cassette

1. Use aluminum tape to affix a thermocouple to the top surface of the Ranger irrigation warming cassette as shown in Fig. 1.
2. Slide the warming cassette into the slot of the Ranger irrigation warming unit.
3. Using room temperature saline/water, prime the cassette per instructions included with it.

   NOTE: To achieve correct results, fluids must be administered into the inlet tube, NOT into the outlet tube.
4. Close patient line with white clamp to stop flow.
5. Turn the Ranger irrigation unit ON and allow it to warm up for 5 minutes.
6. The Ranger irrigation unit display should read 41°C±1. Note the temperature on the thermocouple temperature monitor. If the temperature reading is not 41°C±1, call Arizant Healthcare Inc. Technical Support.

   NOTE: Most handheld temperature meters have a ±1°C tolerance.

Fig. 2: Ranger irrigation fluid warming set



Testing the Over-temperature Alarm Points (48°C [±2] and 50°C [±2])

The over-temperature alarm test causes the Ranger irrigation unit to go into an over-temperature test mode by manually overriding the primary control system and engaging the heaters. The Ranger irrigation system is very responsive to heater input; therefore the test procedures are technique sensitive. Read instructions thoroughly before beginning these tests.

The first alarm point at 48°C (±2) alerts user to the rise in temperature (see step 7). At the 50°C (±2) secondary alarm set point, the unit cuts power to the heaters (see step 8).

7. Loosen the over-temperature screw on the bottom of the Ranger irrigation unit (see Fig. 3). Listen for a slight click as the microswitch opens. **Loosen ½ turn more.** This unit is now in over-temperature test mode, and the temperature output of the unit should begin to rise. When the Ranger display reads 48°C, verify that an audible alarm sounds, the alarm light illuminates, and the display alternately flashes "HI" and the plate temperature.

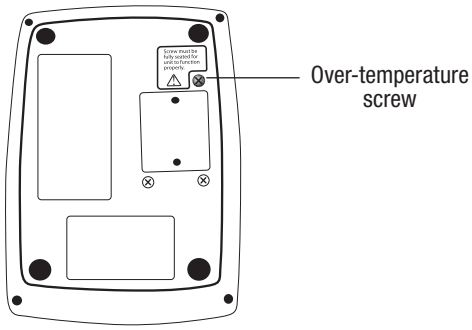


Fig. 3: Ranger irrigation over-temperature screw

8. Listen for the power relay to click at 50°C (±2) (you can feel the click when holding the lower left corner of the unit as you face the front display). The click signifies the secondary alarm trip point and signals that power to the heaters has been shut off. The over-temperature alarm sounds, the alarm light illuminates, and the alphanumeric display alternately reads "HI" and the plate temperature. Watch the thermocouple temperature monitor to determine the unit's peak temperature output (less than 1 minute). The temperature reading on the monitor should peak at 50°C (±2).

   NOTE: If the temperature displayed on the thermocouple monitor exceeds 52°C during the test, tighten the over-temperature test screw on the bottom of the Ranger irrigation unit, unplug it, and run cold fluids through the warming cassette. This returns the unit to normal operating temperature. Call Arizant Healthcare Inc. Technical Support.

9. The secondary alarm is designed to latch. Verify this feature by momentarily turning off the power switch, then turning it on again. The Ranger irrigation unit should continue alarming throughout this sequence.

10. Securely tighten the over-temperature screw, turn off the Ranger irrigation unit, and unplug the unit. Once power is cut to the Ranger irrigation unit, the alarm will cease. The unit is ready to return to service after it cools to normal operating temperature (approximately 20-30 minutes).

Model 247

Ranger Model 247 Maintenance Log

The operating temperature and alarms should be tested at least every 6 months or according to institutional protocol.

MAINTENANCE ACTION PERFORMED

MODEL ______________ **SN** _________

Date ________ **Operating temperature:** (Specification = 41°C±1) ______°C

Over-temperature alarm points:

Audible (48°C [±2] on Ranger unit display) ______°C
Secondary (50°C [±2]) ______°C

Date ________ **Operating temperature:** (Specification = 41°C±1) ______°C

Over-temperature alarm points:

Audible (48°C [±2] on Ranger unit display) ______°C
Secondary (50°C [±2]) ______°C

Date ________ **Operating temperature:** (Specification = 41°C±1) ______°C

Over-temperature alarm points:

Audible (48°C [±2] on Ranger unit display) ______°C
Secondary (50°C [±2]) ______°C

Date ________ **Operating temperature:** (Specification = 41°C±1) ______°C

Over-temperature alarm points:

Audible (48°C [±2] on Ranger unit display) ______°C
Secondary (50°C [±2]) ______°C

Date ________ **Operating temperature:** (Specification = 41°C±1) ______°C

Over-temperature alarm points:

Audible (48°C [±2] on Ranger unit display) ______°C
Secondary (50°C [±2]) ______°C

Date ________ **Operating temperature:** (Specification = 41°C±1) ______°C

Over-temperature alarm points:

Audible (48°C [±2] on Ranger unit display) ______°C
Secondary (50°C [±2]) ______°C

Replacing the Power Fuse

The power fuses are located in the power entry module.

TOOLS AND EQUIPMENT

Small slotted screwdriver

METHOD

1. Disconnect the warming unit from the power source.
2. Remove the power cord.
3. Locate the fuse carrier in the power entry module.
4. Use the small screwdriver to remove the fuse carrier from the power entry module.
5. Remove the blown fuse from the fuse carrier and replace with a new fuse (as marked).
6. Place the fuse carrier back into the power entry module.
7. Reattach the power cord.
8. Reconnect the warming unit to the power source.
9. Turn the unit on to verify normal operation.
10. Record the maintenance action taken.

Troubleshooting

CONDITION	CAUSE	SOLUTION
Nothing illuminates on the warming unit panel.	• Unit is not turned on, plugged in, or power cord is not plugged into an appropriate outlet. • Unit failure.	• Turn unit on. Make sure the power cord is plugged into the power entry module of the warming unit. Make sure the warming unit is plugged into a properly grounded outlet. • Check fuses. • Call Arizant Healthcare Inc. Technical Service.

CONDITION	CAUSE	SOLUTION
Alarm indicator illuminates and alarm sounds, alphanumeric display alternately flashes a temperature of 43˚C for the Model 245 (48°C for the Model 247) or higher and the word "HI."	Temporary over-temperature condition because: • An extreme change in flow rates occurred (e.g., from 500 mL/min to stop flow). • Unit was turned on and reached set point temperature before warming cassette was inserted. • Fluids were prewarmed to above 42°C before being run through the warming unit.	• Open flow to reduce temperature. Alarms will stop when the display reads 41°C. The unit is ready to use. • Alarms will stop when the display reads 41°C. The unit is ready to use. • Turn off unit. Discontinue infusion of fluids. Do not warm fluids before infusing them through the Ranger unit.

CONDITION	CAUSE	SOLUTION
Alarm sounds, alphanumeric display and alarm indicator light go dark.	Primary controller failure. Unit will no longer operate.	Power to heating plates will shut off if temperature rises to 44°C for the Model 245 (50°C for the Model 247). Turn unit off and unplug it. Discontinue use of unit. Discard disposable set. Alarm will continue to sound if you do not unplug unit. Call Arizant Healthcare Inc. Technical Service.

CONDITION	CAUSE	SOLUTION
• Unit alarms soon after plugging it in (unit does not have to be turned on for this condition to occur). • Heater temperature rises to 44˚C for Model 245 (50°C for Model 247) and unit shuts down soon after plugging it in (unit does not have to be turned on for this condition to occur).	Over-temperature screw on bottom of unit is loose or missing.	Make sure over-temperature screw is completely tightened. If it is missing, turn unit off and unplug it. Call Arizant Healthcare Inc. Technical Service.

CONDITION	CAUSE	SOLUTION
Alarm sounds but unit has been turned off.	• Independent backup safety system has been activated. • Over-temperature screw loose.	Unplug unit. Call Arizant Healthcare Inc. Technical Service. • Make sure over-temperature screw is completely tightened. If it is missing, turn unit off and unplug it. Call Arizant Healthcare Inc. Technical Service.

CONDITION	CAUSE	SOLUTION
Cannot remove warming cassette from unit.	• Warming cassette is too full, fluids are still being infused, or clamp is open proximal to the warming cassette. • Warming unit is below patient level, creating excessive back pressure.	• Make sure fluid is drained from warming cassette before sliding out the cassette, that fluids are no longer infusing, and that clamp is closed proximal to the warming cassette. • Raise unit above patient level.

CONDITION	CAUSE	SOLUTION
Alarm indicator light illuminates and alarm sounds, alphanumeric display alternately flashes a temperature of 33°C or below and the word “LO.”	Under-temperature condition caused by very high flow using very cold fluid, or defective heater/ relay.	Alarm should stop when temperature rises above 33°C. If alarm continues, unplug unit and discontinue use. Call Arizant Healthcare Inc. Technical Service.

CONDITION	CAUSE	SOLUTION
Alphanumeric display reads “Er 4” or “Open.”	Open wire on temperature sensor.	Do not use unit. Call Arizant Healthcare Inc. Technical Service.

CONDITION	CAUSE	SOLUTION
Alphanumeric display reads “Er 5” or “Open.”	Electrical interference.	Remove the unit. Refer to biomedical technician or call Arizant Healthcare Inc. Technical Service.

Specifications

Physical Characteristics

WARMING UNIT
4.5 in. (11 cm) high x 7.5 in. (19 cm) wide x 10 in. (25 cm) long;
wt.: 7 lb. 4 oz. (3.3 kg)

CLASSIFICATION
Classified under IEC 601-1 Guidelines (and other national versions of the Guidelines) as Class I, Type B, Ordinary Equipment. Not suitable for use in the presence of flammable anesthetic mixtures with air or with oxygen or nitrous oxide. Classified by Underwriters Laboratories Inc. with respect to electric shock, fire, and mechanical hazards only, in accordance with UL 60601-1 and in accordance with Canadian/CSA C22.2 No. 601.1.

Electrical Characteristics

INPUT VOLTAGE
100-120 or 220-240 VAC

OPERATING FREQUENCY
100-120 VAC, 50/60 Hz
220-240 VAC, 50/60 Hz

MAXIMUM HEATING POWER
900 W

FUSE
2 x 10 Amp for 100 – 120 VAC
2 x 6.3 Amp for 220 – 240 VAC

Temperature Characteristics

SET POINT TEMPERATURE
41°C (±1°C)

OVER-TEMPERATURE ALARM
Model 245: 43°C (±1°C)
Model 247: 48°C (±2°C)

UNDER-TEMPERATURE ALARM
33°C

OVER-TEMPERATURE CUTOFF
Model 245: 46°C (+3, -2°C)
Model 247: 50°C (±2°C)

Leakage Current

Meets leakage current requirements in accordance with UL 60601-1 and IEC 60601-1.

Environmental Conditions

OPERATING TEMPERATURE RANGE
15° to 40°C (59° to 104°F)

STORAGE TEMPERATURE RANGE
-20° to 45°C (-4° to 113°F)

OPERATING HUMIDITY
10 to 85% RH, noncondensing

ATMOSPHERIC PRESSURE RANGE
50 kPa to 106 kPa

Definition of Symbols

ON

OFF

Fuse

Attention - Read accompanying documents

Type B Applied Part

Voltage, alternating Current (AC) Maintenance and Storage

Equipotentiality plug (ground)

Special refuse, discard separately

Protective earth ground

CE 0470

Made in the USA by Arizant Healthcare Inc.

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