HOTDOG VETERINARY WARMING BLANKETS INSTRUCTIONS FOR USE

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Introduction

HotDog Veterinary Patient Warming Blankets (Warming Blankets or Blankets) are part of the HotDog Veterinary Patient Warming System (System). These instructions apply to the following models:

Model Number	Warming Blanket Size	Primary Patient Use
V101	X-Small 10″ X 12″ (25.4 x 30.5 cm)	Mice and rats in research
V102	Small 10″ X 23″ (25.4 x 58.4 cm)	Exotics or pocket pets
V103	Medium 16″ X 22″ (40.6 x 55.9 cm)	An average-size cat
V104	Large 22″ X 31″ (55.9 x 78.7 cm)	An average-size dog
V106	Extra Large 27″ X 47″ (68.6 x 119.4 cm)	Bigger dogs

Indications for use

The System is intended to prevent or treat hypothermia and provide warmth to veterinary patients. The System should be used in circumstances in which patients may not be able to maintain a state of normothermia.

Contraindications

Do not warm ischemic or non-perfused tissue; thermal injury may result. Examples include tissue distal to aortic cross clamping, severe dehydration, or when vasoconstrictive drugs would lead to severe, prolonged vasoconstriction.

Do not warm patients receiving transdermal medication as increased drug delivery may occur.

Warnings

Explosion hazard - Do not use in the presence of flammable anesthetics or highly oxygen-enriched environments such as hyperbaric chambers, oxygen tents, etc.

Inspect the Warming Blanket prior to use and cleaning for signs of damage or excessive wear such as cuts, holes, or loose electrical connections. If signs of wear, nicks, or cuts are evident, remove the Blanket from service.

Discontinue use of the System if the over-temperature indicator and/or any other Alarm continues to sound after reset. See Error Codes: Alerts and Alarms section.

Do not use the Warming Blanket beyond the expiration date marked on the yellow cable.

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Precautions

- Use under the direct supervision of a clinician.
- Monitor the patient's vital signs regularly during warming according to institutional protocol. If vital sign instability occurs, notify a clinician.
- Use over-body warming instead of under-body warming when using a vacuum-activated positioning system.
- Maintain contact between the patient and the labeled sensor on the Warming Blanket.
- Do not expose the sensor to a continuous exchange of cold irrigation fluids.
- Use over-body warming instead of under-body warming on patients with any risk factors such as dehydration, bony prominences, poor circulation, lack of perfusion, or any illness that may impact circulation. (For dental procedures, see below.)
- Discontinue use of the Blanket if the shell has been compromised.
- Do not use the System with other warming modalities, e.g. Blankets should not be used in combination with a heated surgical table or any other warming modality.
- Adjust placement of the Blanket during x-ray imaging. The label markings on the Blanket as well as the internal wiring located along the edges of the Blanket may appear in images.
- Do not continue to use the System if a safety Alarm sounds after reset. See Page 5 & 6, Error Codes: Alerts & Alarms for detailed troubleshooting information.

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<p align="center"><u>PRESSURE REDUCTION</u></p>

- The Warming Blanket is not a pressure-reduction device. Steps must be taken to mitigate heat-on-pressure situations when the Blanket is under the patient on hard surfaces, surgery tables, or dental grates. Use a pressure-reduction device (such as the HotDog Pressure Reduction Pad) or a soft pad, thick blanket, or thick towel between the Blanket and the hard surface.
- Longer duration procedures (approximately two hours or more) create greater risks. When a patient remains in a single position for an extended amount of time, ischemia can occur at points of elevated pressure, which can lead to tissue necrosis. Eliminate pressure points from occurring by appropriate pressure reduction.
- Closely monitor the temperature selection. Start by using the 40°C/104°F temperature setting. If your patient is becoming normothermic, there is no need to increase the temperature. If you are not getting the desired results, you may increase the temperature, following all precautions.
- Use over-body warming instead of under-body warming on patients with any risk factors ("Risk Factors") such as dehydration, bony prominences, poor circulation, lack of perfusion, or any illness that may impact circulation.(Note: for dental procedures, see below.)
- Hard objects should not be placed between the patient and the Blanket.
- If a rigid cautery ground plate is used, ensure that adequate steps are taken to mitigate pressure. Do not place the cautery plate on the sensor area of the Blanket.

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DENTAL PROCEDURES

Although the System is particularly useful in dental procedures, clinicians should take a few extra precautions to protect the patient:

- Most importantly, ensure that the patient is in contact with the sensor at all times during the case. Follow the temperature selection and pressure-reduction guidelines.
- Place a towel under the patient's mouth/head to absorb dental fluids and to reduce drainage onto the Warming Blanket. Make certain that the patient's body is not lower than the head.
- Do not place a sheet, towel, or other barrier between the patient and the Blanket.
- You may wrap the Blanket around the patient. However, when the Blanket is under the patient, do not select a temperature above 40°C/104°F.
- Use over-body warming instead of under-body warming on patients with any risk factors such as dehydration, bony prominences, poor circulation, lack of perfusion, or any illness that may impact circulation.
- The Blanket is not a pressure-reduction device. Steps must be taken to mitigate heat-on-pressure situations when the Blanket us under the patient on hard surfaces, surgery tables, or dental grates. Use a pressure-reduction device (such as the HotDog Pressure Reduction Pad) or a soft pad, thick blanket, or thick towel between the Blanket and the hard surface.

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GENERAL INSTRUCTIONS

Use under the direct supervision of a clinician.

1. Select the Warming Blanket size that is the best fit for your patient, covering as much of the patient as possible.

   Position the Blanket under, over, or around the patient as desired, with the black side facing the patient. Make sure the patient is in contact with the sensor. Refer to Precautions and Pressure Reduction for guidance.

2. If desired, use the included strap to help conform the Blanket to the patient.

   Connect the yellow cable to the short yellow cable off the side of the Blanket by aligning both red dots and pushing straight in. Do not twist!

3. Connect the opposite end of the yellow cable to the Controller by inserting it into a yellow port with the red dot on the cable facing up. Do not twist!

4. Turn the Controller on to begin warming and select the desired temperature on the Controller. (Refer to the appropriate HotDog Veterinary Controller User and Technical Manual). The Blanket will take approximately 3 minutes to reach the selected temperature.

5. Monitor the temperature of the patient frequently during each case. Increase or decrease the Blanket temperature gradually to maintain normothermia.

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GUIDELINES FOR TEMPERATURE SELECTION

Start by using the 40°C/104°F temperature setting. If the patient is becoming normothermic, there is no need to increase the temperature. If you are not getting the desired results, you may increase the temperature, following all precautions.

	Celsius Display	Fahrenheit Display
LOW	37	99
	38	101
MED	39	102
	40	104
	41	106
HIGH	42	108
	43	110

Use over-body warming instead of under-body warming on patients with any risk factors such as dehydration, bony prominences, poor circulation, lack of perfusion, or any illness that may impact circulation. For dental procedures, see above.

ERROR CODES: Alerts & Alarms

If an Alarm or Alert condition occurs, the associated error code will remain on the Controller display until the condition is resolved. (If using a V006 Controller refer to that specific IFU for information on Alarms.)

Once the Alarm or Alert condition has been displayed, the display will return to the main operating screen where the error code will still be present on the screen in place of the temperature set point.

To resolve an Alarm, follow the on-screen instructions. Devices will not be active when an Alarm is occurring.

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NOTE: BLANKET WILL STOP WARMING IF AN ALARM CONDITION APPEARS

Error Codes	Error Description	Problem Solving Steps
E1	Over-Temperature	When the temperature exceeds one degree above the set point, the Alarm sounds and power is removed from the Warming Blanket. Unplug the Blanket to reset the Alarm. Wait 5 minutes and then reconnect the Blanket. Turn the Controller on and select the temperature. if the Alarm occurs again, stop using the Blanket and contact technical support.
E2	Failure To Reach Temp	When the Warming Blanket does not reach the temperature setpoint within 10 minutes, the Alarm sounds, and power is removed from the Blanket. Check to make sure the Blanket is in contact with a patient and the sensor area is touching the patient. Unplug the Blanket and reconnect to reset. If the Alarm occurs again, stop using the Blanket and contact technical support.
E3	Port Current Reached	If the electrical current in the Warming Blanket exceeds the allowable limit, the Alarm sounds and power is removed from the Blanket. This may indicate an electrical problem with the Blanket. Unplug the Blanket from the Controller and reconnect to reset. If the Alarm occurs again, stop using the Blanket and contact technical support.
E4	Sensor or Cable Failure	If the Controller loses communication with the sensor in the Warming Blanket, an Alarm sounds, and power is removed from the Blanket. This may be caused by an electrical problem in the Blanket or Controller. Swap the cables and Blanket with known good product to isolate the problem if possible. If the problem continues, stop using the Blanket or cable and contact technical support
E5	Blanket Fold Detection	This Error Code does not apply to Veterinary Warming Blankets.
E7	Auto Mode Disengaged	The temperature sensor has exceeded 46° C/ 114.8° F. Disconnect the Warming Blanket and contact technical support.
E8	Over-Temperature Sensor (Secondary)	The temperature sensor has exceeded 46° C. Disconnect the Warming Blanket and contact technical support.
EA, EC, EF, EH or EP	Hardware Failure	Turn off the Controller, wait one minute, then restart. If the problem persists, contact technical support.

Contact Technical Support @ 952.465.3500 or CS@augsurg.com

Automatic Shutoff Timer - This feature prevents the System from unintentionally being left on. The System is not intended for use without a clinician present. The System defaults to a 6-hour shutoff. If there is no interaction with the Controller within 6 hours, it will automatically shut off.

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CLEANING AND CARE INSTRUCTIONS

1. Clean and disinfect Warming Blankets between patient uses if they appear visibly soiled. If Blankets are not visibly soiled, cleaning and disinfection at the end of the day is recommened. The cleaning process takes 30 seconds or less. Use a soft cloth or sponge. Blankets can be cleaned by wiping with an approved cleaner.

2. Blankets should be disconnected from the Controller prior to cleaning.

3. Before cleaning a Blanket, inspect the shell for nicks, tears, and cuts. Discontinue use if nicks, tears, or cuts are present.

4. Do not use hydrogen peroxide-based cleaning solutions as these can adversely affect the internal heater fabric. Do not use cleaning products that are abrasive. The following cleaners are approved for use: Alcohol, Sodium Hypochlorite (bleach diluted with water), Chlorhexidine Gluconate, and Ammonium Chloride-based solutions.

5. Do not launder or immerse Blankets in water. Do not spray cleaning solutions into the electrical connector.

6. Do not place Blankets in an autoclave, sterilizer, automatic washer - disinfector, or any other high-temperature system as this may damage Blankets.

7. Ensure that Blankets are rinsed thoroughly after cleaning to avoid patient contact with residual cleaning solutions.

8. After cleaning, store Blankets in a dry place or use storage rack.

WARRANTY/LIFE EXPECTANCY/EXPIRATION

Warming Blankets come with a one-year limited warranty from the shipping date. See www.vetwarming.com for details. Contact Customer Service to determine if a Blanket is eligible for a warranty replacement.

The life expectancy of a Blanket varies with use and care. The average life is approximately 18 months.

Blankets expire 2 years after shipping and, if not removed earlier, must be removed from service at expiration. The expiration date is printed on the short yellow cable on the side of each Blanket.

DEFINITION OF SYMBOLS

	Attention; consult accompanying documents	**REF**	Reference Number		See information for use at the provided website.
	BF Patient Applied Part according to IEC60601-1.	**SN**	Serial Number		Manufacture Date
	Do not use after YYYY-MM-DD		Transport and storage temperature range		Manufacturer
	Store Dry		Transport and storage humidity range		Temperature Sensor
	Protect Blanket from sharp objects. Discontinue use if Blanket is cut or damaged.		See IFU for Warnings and Precautions		Return to Authorized Representative
	Natural Rubbber Latex Free		Not Sterile		
IPX2	Protected against dripping water when tilted up to 15°; vertically dripping water shall have no harmful effect when the enclosure is tilted at an angle up to 15° from its normal position.				

HotDog is a trademark of Augustine Temperature Management, registered in the U.S. Patent & Trademark Office. Devices are protected by some or all of the following patents: (US Patents 7,543,344; 7,714,255; 7,851,729; 7,786,408; 8,062,343; 8,283,602; 8,604,391; 8,624,164; 8,772,676; 8,986,359; 9,962,122; 9,668,303; 10,154,543; 10,201,935; 10,206,248; 10,506,668; PCT Patent EP 2,062,460) . Other patents are pending.