

Operator's Manual

ChillBuster[®] VET

Veterinary Patient Warming System
Model 8201 Controller

A product of Global Resources International, Inc.
Veterinary Products Division



Version 9-2022

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ThermoGear is a wholly-owned subsidiary of Global Resources International, Inc.

System Limited Warranty: This product carries a one-year limited warranty from the documented date of purchase. Details may be found on page 13, Service & Warranty.

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WARNING: This manual was written for those clinicians and veterinary personnel who (under direction of a clinician) may use this warming system for treating or mitigating hypothermia and its effects. All system components are of high-quality design. Regardless, inherent structural limitations dictate that sound clinical judgment must be used in all cases.

WARNING: NEVER use a wet blanket or mat for patient treatment. A moist blanket or mat will at least partially absorb heat intended for the patient and may degrade heat distribution. A wet blanket or mat may overheat or heat unevenly and excessively.

CAUTION: The performance or safety of this veterinary device may be compromised if water or other fluids enter the connections or interiors of the controller, blanket, or mat. All connections should be protected from fluid exposure.

CAUTION: It is important that the user thoroughly read and understand this manual and practice using the warming system away from any patient before using it for therapy.

General Information

Function and Intended Use/Indications for Use

The ChillBuster® VET Patient Warming System has been developed to reduce the effects of hypothermia encountered during the trauma of a surgical procedure or other medical crisis which could result in the onset of a hypothermic condition. Use is limited to whole-body warming in those animals that are free of skin conditions or other impairments in which distributed heat application is deemed to be contraindicated by the responsible veterinarian.

What is Included?

- (1) ChillBuster® VET Blanket OR Mat
- (1) ChillBuster® VET Model 8201 Controller
- (1) 110V/220V AC to 12 V DC Power Supply
- (1) Wye Cable Assembly
- (2) Disposable Covers

Definitions

This manual highlights three types of ancillary information by using boxed text in a bold, italic font, as follows:

NOTE: to relay useful points or tips about system operation.

CAUTION: about conditions or practices that risk damage to the system or other property.

WARNING: to label conditions or practices that pose possible risk to personnel or animal patients.

Features

Introduction

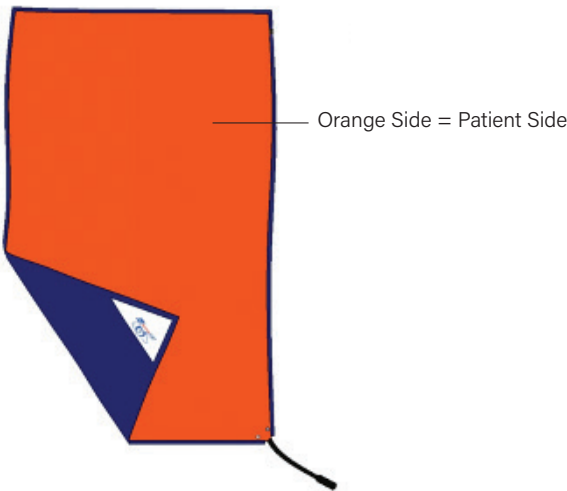
This section details the basic structure of each system. The System Operation section of this manual outlines system function in practice.

Blanket/Mat

The **Blanket** option is a flexible heating assembly normally used to more directly encase the animal.

The **Mat** option is a less flexible or semi-rigid heating assembly to be placed flat on the surface below the animal.

For patient and operator safety considerations, the blanket/mat is powered by 12 V DC.

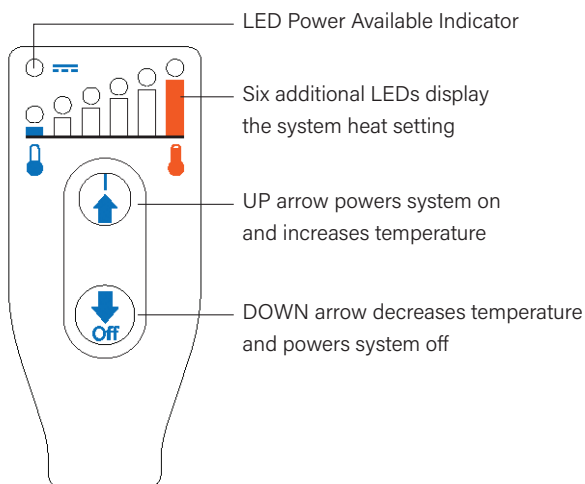


CAUTION: The blankets/mats are not machine washable. Repeated machine washing will eventually destroy the heating layer and cause hot/cold spots to develop.

Controller

The controller features a hook for hanging in a convenient location and a wye cable for connecting to the blanket/mat and the power supply.

The face of the controller housing has two buttons and seven lights.



Two soft push buttons are provided for control. The rounded (convex) bump identifies the UP button, to turn on or increase the heating power. The depressed (concave) bump identifies the DOWN button, to be used to decrease the heating power, turn off the system, or cancel an alarm. A quick button press triggers a one-increment increase or decrease. Holding a button down triggers a slow auto adjustment, after a brief delay.

A light emitting diode (LED) in the upper left-hand corner provides status of the external power (DC power available).

Six additional LEDs display the system heat setting. Full range of normal blanket/mat temperature is approximately to 37° C to 41° C (98.6° F to 105.8° F).

If an ERROR or Fault condition is detected, all six bar graph LEDs will flash and an audible alarm will sound. This indicates that there is a problem that should be addressed. The system may have detected an over-temperature condition, or the blanket/mat connection may be compromised. See the Alerts section of this manual for more information.

System Operation

System Setup and Use

1. Place a moisture-resistant disposable cover of the appropriate size around the blanket or mat.
2. Lay the blanket/mat orange side up on a flat, stable surface.
3. Connect the controller to the blanket and to the power supply. Finally, connect the power supply to external AC power.

WARNING: Do not allow animal patients to chew on the AC power cord; serious electrical shock injury may occur.

4. Press the UP arrow to power up the unit. Select the desired heat setting via the UP and DOWN arrows. The LED lights will indicate which heat setting is active.
5. Do not allow the presence of any fluid between the patient and the blanket or mat. The patient must be in direct, DRY contact with the center part of the blanket or mat on the orange side.

WARNING: NEVER use a wet blanket or mat for patient treatment. A moist blanket or mat will at least partially absorb heat intended for the patient and may degrade heat distribution. A wet blanket or mat may overheat or heat unevenly and excessively.

System Shutdown and Storage

1. Press and hold the DOWN arrow switch for several seconds to turn the system OFF. Unplug the power supply. All LEDs will be off.
2. Disconnect the wye cable from the blanket or mat.
3. Remove and discard the disposable cover. If blanket or mat cleaning is required, see Care & Maintenance section.
4. When storing the unit in a dry environment, be sure the blanket/mat is laid flat or loosely rolled, NOT folded. Heavy equipment should not be placed on top of the unit while being stored.

***CAUTIONS: Do not carry blanket or mat by its power cord.
Loosely roll the blanket/mat or lay flat for storage.
Folding or creasing the blanket/mat can damage internal wiring.***

CAUTION: The temperature of the patient and of the blanket or mat should be checked frequently, and the proper position of the patient should be verified. Sedated patients may migrate out of proper position. Excessive temperatures may cause injury.

Alerts

System Alerts and Limits

The ChillBuster® VET System circuitry is a constant-temperature design with safeguard circuitry that constrains blanket or mat maximum heating to about 41° C (105.8°F). An over-temperature alert is activated at approximately 42° C (107.6°F).

The ChillBuster® VET Model 8201 system monitors anomalous conditions that may occur and, if necessary, activates simultaneous audible and visual alarms to alert the user.

WARNING: Animal fur, ambient and surface temperatures and blanket/mat coverings will affect the actual heat delivered to the patient. Adjust and monitor as necessary to achieve optimum results.

Suggested Responses to System Alerts

System Alerts are initiated by a high temperature condition or a blanket/mat fault (electrical short in heating or thermistor circuits). If a fault is detected, the fault condition must be remedied and then cleared before operation may resume. All alarms use the same pattern of sound and lights.

If an alarm occurs, all six heat level LEDs will begin flashing and an audible alert will sound. Power to the blanket or mat will be interrupted.

When an alarm occurs, first check the patient.

Press and hold the DOWN ARROW to turn the system OFF. The audible alarm and visual flashing LED operation should cease. If there is no response to the button press, the system will need servicing.

Determine if a high heat condition seems to exist, indicating that an over-temperature condition has been detected. This condition may be normal if the ambient temperature is high or if an additional covering has been placed on the patient to reduce heat loss. After the patient and blanket/mat have cooled, the controller can be re-set to a lower control point. If a malfunction is suspected, use of the blanket or mat should be discontinued.

Check for proper connections. A loose connection to the blanket/mat will result in an audible alarm and the ERROR ALERT Indicator will be illuminated.

If the alarm cannot be corrected by resetting the connections and cleaning the contacts, then the system may require servicing.

Remove the patient from the blanket/mat and keep the patient warm using alternative techniques.

At a convenient time, re-check blanket/mat operation by noting blanket/mat temperature at various power settings. If the blanket/mat does not heat, or if the temperature is not stable, the unit may require servicing.

If a surgical procedure causes the patient or the blanket/mat to become wet, turn off the ChillBuster® VET system until the liquid can be removed in order to avoid the risk of uneven or extreme heating that may result from exposure to liquids.

When used in a crate or cage, monitor the patient to ensure that the blanket/mat remains DRY. Turn the system off and dry the blanket/mat before resuming operation. A wet blanket/mat may result in uneven or extreme heating.

Safety Feature Summary & User Precautions

The user should read and understand this safety summary. In addition, specific cautions and warnings are presented throughout this document to further emphasize topics of special importance.

CAUTION: Failure to use disposable covers (Part Numbers 150-0015-01 or 150-0015-02) on the blanket/mat may expose the unit to liquids and soil and compromise the electronic circuitry.

The system is intended for therapeutic use by qualified veterinary personnel only.

The disposable blanket/mat covers are needed to simplify cleanup and extend blanket/mat life for each patient.

Heat energy supplied to the patient depends on system settings and such factors as ambient conditions, the use of other covers, patient fur and substances on the patient's fur or skin.

Do not autoclave the system controller, blanket/mat or any wiring, cabling or system components or accessories. Severe damage will occur.

If the controller senses a unit temperature above 42° C (107.6° F), the automatic shut-off feature will activate.

WARNING: This automatic shut-off feature may be impacted by improper care or storage of the system.

When connecting the system to external AC power, system integrity is best ensured by always connecting the controller to the blanket/mat first, the power supply to the controller connection, then finally connecting to AC external power.

Prior to each use, perform electrical and visual checks on all system cables, blanket/mat and other elements. Never use any cable, blanket/mat or other system component that shows visual or functional problems.

CAUTION: Neither the blanket nor the controller has any user-serviceable parts. If either does not function properly for any reason, immediately discontinue system use and contact customer service for troubleshooting and possible repairs.

Replace any compromised component before using the system.

Use only accessories recommended or supplied by the manufacturer. Incompatible accessories could result in system malfunction or failure, therapy shortfall, and possible harm to the patient, users, or other personnel.

Devices, components, and accessories must always be used according to standards for system use, handling, storage and maintenance, with emphasis on safety and effectiveness.

Thoroughly read and understand the operator's manual and all other labeling. Practice using the system away from any patient until competence is assured.

This system is not designed for customer or technician servicing. The system warranty and general product problem resolution is detailed in latter sections of this manual.

Care & Maintenance

Remove disposable covers using aseptic techniques, as appropriate.

All system hardware components may be wiped with a damp cloth using mild cleaners that do NOT contain ammonium, peroxide or strong solvents.

A water-alcohol based cleaner or water-based enzymatic, pet-safe cleaner may be used. Apply carefully in order to prevent the cleaner from entering system components.

CAUTION: Prevent cleaning solution or water from running into or on crevices, cavity edges or corners, electrical contacts, connector pins and sockets of the system. No system hardware should ever be immersed in fluid.

While cleaning, carefully inspect all components for wear, especially wires or cables which may be more exposed to damage. Timely maintenance will help avoid problems.

The blanket/mat should be dried thoroughly before and after use, and prior to storage.

The disposable cover should be used to simplify cleaning and increase blanket/mat longevity. See page 16 of this manual for ordering information.

CAUTION: Never use a wet blanket or mat for animal treatment. A moist blanket or mat will at least partially absorb heat intended for the animal and may degrade heat distribution. A wet blanket or mat may overheat or heat unevenly.

Service & Warranty

Customer Service, Warranty & Repair Service

Warranty & Returned Goods. These issues may be addressed by calling Customer Service. Always call before returning any goods, in order to obtain return authorization (RMA) and shipping procedure. Complete warranty information is provided in the next section of the manual.

**For Customer Service, Sales, Technical Support,
Warranty and Return Materials inquiries call:**

865-318-8982

Monday-Friday, 9:00 am to 4:00 pm EST

Limited Warranty

ChillBuster® VET Model 8201 Systems are warranted against defective material and workmanship for one year from the documented purchase date indicated by the lot number on the blanket label.

Systems are warranted against defective material and workmanship under normal use and care as outlined in this user manual.

Warranty repairs will be free of charge. Any repair completed on the system will not extend the original warranty. Out of warranty repairs and system inspections will be quoted upon request.

Customers will be responsible for one-way shipping charges for any return of product (warranty or out of warranty).

ChillBuster® VET warranty does not cover the following:

- Any product that has been damaged by accident, misuse, abuse, alteration or repair by anyone other than authorized company technicians.
- Impairment from improper or excessive voltage to the system.
- Regular wear and tear of the product.

Before returning any goods, the customer should contact Customer Service for evaluation and RMA information.

RMA# must be obtained from the company prior to shipping. Shipments must be prepaid with RMA# clearly annotated on the outer shipping carton. RMA# is valid for 30 days from date of issuance.

Warranty is non-transferable.

Product Specifications & Declarations

System Dimensions	<p>Controller 7"(l) x 2"(w) x 1"(h)</p> <p>Cable length Controller to Blanket approx. 7'</p> <p>Cable length Power Supply to Blanket approx. 7'</p> <p>Power Cord approx. 10'</p>
Blanket	22" x 25" and 20" x 30"
Mat	22" x 25" and 20" x 30"
Controller	<p>Operating ambient temperature: -10° C to + 41° C (+14° F to +105.8° F)</p> <p>Shipping/storage temperature: -40° C to +50°C (-40° F to + 122° F)</p> <p>Humidity: 5% to 90% RH (non-condensing) @ 35° C</p>
User Interface	<p>Controls: two push-button switches, soft control of Blanket/Mat heating</p> <p>LED indicators: six temperature level (green), one DC power available (amber)</p> <p>Power input connection</p> <p>Blanket/Mat connection</p>
System	<p>Power: high setting approx. 60 watts</p> <p>Thermal cutoff (in-blanket thermistor) above 42° C ± 1° C (107.6° F ± 1.8° F)</p> <p>Approximate control temperature range in 6 steps 37° C to 41° C (98.6° F to 105.8° F)</p>
Blanket Covers	Moisture-resistant polypropylene
Classification	Water ingress IPX0 (not rated for water egress)

NOTE: Product design, specifications, and declarations are subject to change.

Ordering Information

ChillBuster® VET moisture-resistant, disposable covers are available for purchase to use with the blanket or mat. These single-use covers are provided in cases of 25.

Complete Warming Systems	
Part Number	Description
150-8201-01	ChillBuster®VET Patient Warming Blanket System (22"x25")
150-8201-02	ChillBuster®VET Patient Warming Blanket System (20"x30")
150-8201-51	ChillBuster®VET Patient Warming Mat System (22"x25")
150-8201-52	ChillBuster®VET Patient Warming Mat System (20"x30")

Disposable Blanket/Mat Covers		
Part Number	Description	Applicable System Model Number
150-0015-01	Disposable Covers 25 per case (23"x26")	150-8201-01, 150-8201-51
150-0015-02	Disposable Covers 25 per case (21"x31")	150-8201-02, 150-8201-52

For Customer Service and Sales inquiries call:

865-318-8982

Monday-Friday, 9:00 am to 4:00 pm EST



Version 9-2022