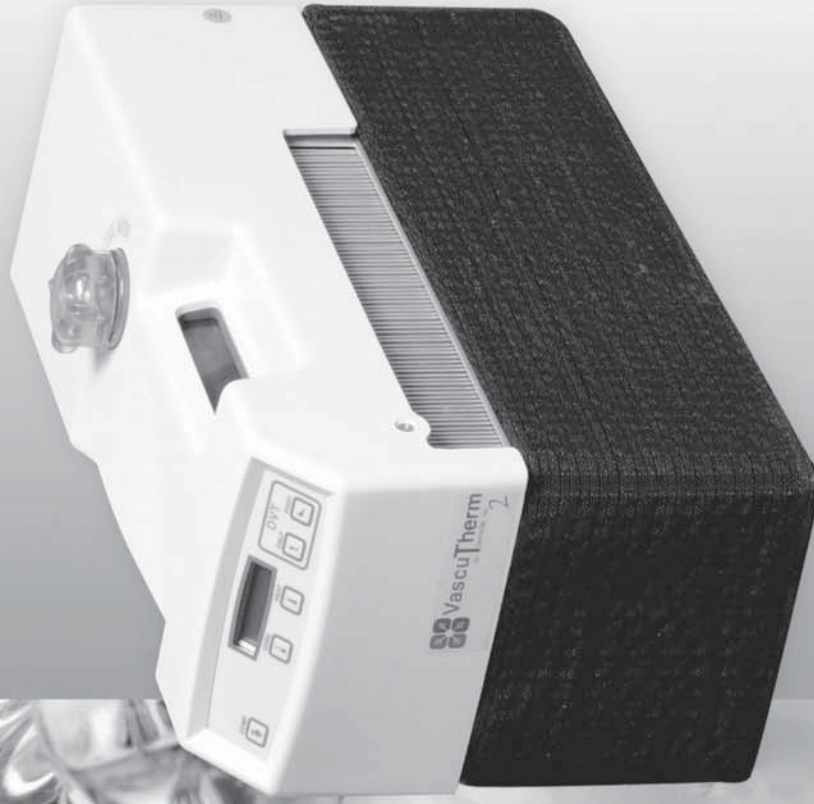


VascuTherm[®]

by hermoTek, Inc.



USER MANUAL

ThermoTek[®]



 BETTER THAN ICE[™]

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Section 16 of this manual.*



ThermoTek[®]

10. Display Messages and Alarm Indicators

10.1. Normal Operation

The following list contains display messages that you may encounter during normal therapy operation:

- **VascuTherm Rev: Vascu_xx_yy:** Boot-up screen displayed temporarily.
- Default display screen is Status screen with the top line showing Thermal Therapy operation mode and the bottom line showing Compression Therapy operation mode.

Top Display Line Options:

- **Cool/Heat Off:** Thermal subsystem in idle. System ready to begin prescribed therapy.
- **Therpy Set XX °F:** Preset cool mode therapy temperature is active. (XX in 43-50 °F range).
- **Therpy Setting 105 °F:** Preset heat mode therapy temperature is active.
- **CNTRST SET XX °F:** Preset cycling between cool and heat therapy temperatures (XX = 49 or 105).

Bottom Display Line Options:

- **Compression Off:** Pneumatic subsystem in idle. System ready to begin prescribed therapy.
- **STD Compr On:** Compression Therapy for Edema and Lymphedema (standard) is active.
- **Timer: H:MM:** Preset Therapy Timer.
- **DVT Foot Bilt On:** DVT Foot Bilateral Therapy is active.
- **DVT Foot Left On:** DVT Foot Left Therapy is active.
- **DVT Foot Rght On:** DVT Foot Right Therapy is active.
- **DVT Calf Bilt On:** DVT Calf Bilateral Therapy is active.

- **DVT Calf Left On:** DVT Calf Left Therapy is active.
- **DVT Calf Right On:** DVT Calf Right Therapy is active.
- **C: ON DVT FT: BILT:** DVT Foot Bilateral Therapy is active.
Compression Therapy for Edema and Lymphedema is active.
- **C: ON DVT FT: LEFT:** DVT Left Foot Therapy is active.
Compression Therapy for Edema and Lymphedema is active.
- **C: ON DVT FT: RGHT:** DVT Right Foot Therapy is active.
Compression Therapy for Edema and Lymphedema is active.
- **C: ON DVT CF: BILT:** DVT Calf Bilateral Therapy is active.
Compression Therapy for Edema and Lymphedema is active.
- **C: ON DVT CF: LEFT:** DVT Left Calf Therapy is active.
Compression Therapy for Edema and Lymphedema is active.
- **C: ON DVT CF: RGHT:** DVT Right Calf Therapy is active.
Compression Therapy for Edema and Lymphedema is active.
- **Hold Key for 1 sec To Start:** Desired key was not held long enough to start the selected therapy setting.
- **Therapy Temp XX° F:** The current therapy temperature.
- **Contrast Temp XX °F:** The current contrast therapy temperature.
- **Compression Off:** Pneumatic compression is not currently operating.
- **Compression Alternating:** Pneumatic compression therapy is currently active and cycling.
- **Compression XX mmHg:** The current compression level in the wrap.
- **DVT Foot Off:** DVT Foot therapy mode is selected but not currently engaged.
- **DVT Foot Bilateral:** DVT Foot therapy mode is active and currently providing alternating compression treatment between the left and right feet by the preset cycle.

- **DVT Foot Left:** DVT Foot therapy mode is selected and currently providing compression cycles to the left foot only.
- **DVT Foot Right:** DVT Foot therapy mode is active and currently providing compression cycles to the right foot only.
- **DVT Foot XX mmHg:** The current compression level in the foot wrap.
- **DVT Calf Off:** DVT Calf therapy mode is selected but not currently engaged.
- **DVT Calf Bilateral:** DVT Calf therapy mode is active and currently providing alternating compression treatment between the left and right lower-legs by the preset cycle.
- **DVT Calf Left:** DVT Calf therapy mode is active and currently providing compression cycles to the left lower-leg only.
- **DVT Calf Right:** DVT Calf therapy mode is active and currently providing compression cycles to the right lower-leg only.
- **DVT Calf XX mmHg:** The current compression level in the calf wrap.

10.2. Warnings, Alarms, and System Errors

The VascuTherm Therapy System has many internal software safeguards to help protect the patient and the unit from unsafe operation. In this section you will find a list of possible system warnings and alarms that may occur if a potentially unsafe situation arises while using the VascuTherm unit.

Warnings indicate that an unsafe condition could or is about to occur. Warning notifications combine the use of a flashing description on the upper line of the display and a fast beeping noise.

Alarms indicate that an unsafe condition is currently present and halts all current therapies to protect the patient. The alarm state must be corrected before any therapy can be restarted. Alarm notification combines the use of “ALARM ACTIVE” text on the upper line and an alarm description on the lower line of the display. An audible notification is also initiated by a slow beeping noise. Press any button to clear the active alarm. If the alarm state is still present, the alarm message will reappear and prevent the start of any therapy.

System Errors indicate that an internal software or hardware error has occurred and that an unsafe condition is currently present and all current therapies are halted to protect the patient. An example of this is when there is a problem reading from one of the internal sensors. System errors typically require service to the unit to identify and correct the problem. If you encounter a system error, please write down the 3-digit number indicated on the display and contact the clinic or hospital that prescribed the unit or the Durable Medical Equipment (DME) provider. If assistance is not available or ineffective, please contact ThermoTek technical assistance toll-free at 1-877-242-3232 during the hours of 8am-5pm Central Time. If technical assistance is needed after these hours, you may contact the 24-hour line at (214) 502-8800.

Below is a list of common user-related warnings and alarms that may occur during therapy operation of the unit.

!!WARNING ACTIVE!! BLOCKED AIR FLOW: When using any of the pneumatic compression therapies available, the software monitors the rate of air pressure change. If the rate air pressure change is faster than a preset value in a preset time this warning activates.

!!WARNING ACTIVE!! CHECK WRAP: When using any of the pneumatic compression therapies available on the unit, the software monitors the amount of time taken to properly inflate the wrap. If a preset time expires before proper inflation was reached this warning activates.

!!WARNING ACTIVE!! CHECK FLOW/FLUID: When using either the COOL or HEAT temperature therapies available on the unit, the software monitors the unit's ability to change the coolant temperature. If the software suspects that the unit was not able to properly alter the coolant temperature due to a low coolant level or low coolant flow rate this warning activates.

!!WARNING ACTIVE!! BLOCKED AIR FLOW: When using any of the pneumatic compression therapies available, the software monitors the rate of air pressure change. If the rate air pressure change is faster than a preset value in a preset time a warning activates first. If the warning continues and the rate of pressure change is not in a normal range, this alarm activates.

!!ALARM ACTIVE!! CHECK WRAP: When using any of the pneumatic compression therapies available on the unit, the software monitors the amount of time taken to properly inflate the wrap. If a preset time expires before proper inflation was reached, a warning activates first. If the warning continues and the wrap is still unable to properly inflate, this alarm activates.

!!ALARM ACTIVE!! HIGH H-SINK TEMP: Anytime the unit is turned ON, the software constantly monitors the temperature of the heat sink fins visible on either side of the unit. If the software determines that the heat sink fin temperature is hotter than a safe level this alarm activates.

!!ALARMS ACTIVE!! HIGH TEMP ALARM: Anytime the unit is turned ON, the software constantly monitors the temperature of the internal coolant manifold. If the software determines that the temperature of the manifold is hotter than a safe level, this alarm activates.

!!ALARMS ACTIVE!! KINKED WRAP - H: When using any of the pneumatic compression therapies available on the unit, an independent backup pressure switch constantly monitors the system air pressure value. This alarm activates if the software controlled pneumatic solenoids fail to properly activate during an emergency pressure vent and the backup pressure safety switch activates. The software monitors and detects that the pressure safety switch has engaged and this alarm activates.

!!ALARMS ACTIVE!! KINKED WRAP – S: When using any of the pneumatic compression therapies available on the unit, the software monitors the current air pressure value by way of an internal pressure sensor in the event that unsafe high pressure is detected by the pressure sensor, the software executes an emergency pressure vent and this alarm activates to notify the patient of the therapy termination.

!!ALARM ACTIVE!! CHECK FLOW/FLUID: When using either the COOL or HEAT temperature therapies available on the unit, the software monitors the unit's ability to change the coolant temperature. If the software suspects that the unit was not able to properly alter the coolant temperature due to a low coolant level or low coolant flow rate a warning activates first. If the warning continues and the unit is still unable to properly alter the coolant temperature due to a low coolant level or low coolant flow rate this alarm activates.

!!ALARM ACTIVE!! LOW H-SINK TEMP: Anytime the unit is turned ON, the software constantly monitors the temperature of the heat sink fins visible on either side of the unit. If the software determines that the heat sink fin temperature is colder than a safe level this alarm activates.

!!ALARM ACTIVE!! LOW TEMP ALARM: Anytime the unit is turned ON, the software constantly monitors the temperature of the internal coolant manifold. If the software determines that the temperature of the manifold is colder than a safe level, this alarm activates.

SYSTEM ERROR XXX: This alarm indicates that an internal software or hardware error has occurred. The unit potentially requires service by an authorized technician. If you encounter a system alarm, please write down the 3-digit number indicated on the display and contact the clinic or hospital that prescribed the unit or the Durable Medical Equipment (DME) provider. If assistance is not available or ineffective, please contact ThermoTek technical assistance toll-free at 1-877-242-3232 during the hours of 8am-5pm Central Time. If technical assistance is needed after these hours, you may contact the 24-hour line at 214-502-8800.