VeraTemp™ Personal Use Non-Contact Thermometer

By Brooklands Inc.

READ INSTRUCTIONS BEFORE USE
DESCRIPTION
The VeraTemp™ Non-Contact Thermometer is a hand held, battery-powered device that is intended for the intermittent measurement and monitoring of human body temperature in any age patient. It measures the infrared energy emitted from the skin surface of the forehead. Because there is no need to touch the skin, the VeraTemp™ is hygienic and there is no need for probe covers.

INTENDED USE
The VeraTemp™ Non-Contact Thermometer is an infrared thermometer for body surface and forehead temperature measurements in Infants, Children, and Adults that does not require any skin contact. It is manufactured in accordance with ASTM E1965-98 Standard specifications for infrared. Thermometers for intermittent determination of patient temperature in a clinical environment.

IMPORTANT SAFETY INSTRUCTIONS
Basic safety precautions should always be followed.
• Read instructions before use, and use thermometer only as described in this manual.

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• Do not drop or expose to electrical shocks.
• The thermometer must only be used in an ambient temperature between 10°C and 40°C (50°F and 104°F)
• Do not expose this thermometer to extreme temperature conditions of >50°C or < -20°C (>122°F or < -4°F)
• Do not use outdoors or near a fireplace or stove.
• Do not attempt to sterilize the thermometer.
• The lens of the infrared sensor is the most fragile part. Do not touch the glass of the infrared sensor with your fingers.
• If necessary, clean the glass surface of the infrared sensor with a cotton swab dipped in 70% isopropyl alcohol.
• Do not use this thermometer if it is not functioning properly, or if it has been exposed to extreme conditions, damaged, immersed in water, or exposed to electrical shocks.
• The only service you can perform on the device is to change the batteries. When doing so follow the
instructions in this manual. Do not attempt to repair this device yourself. DO NOT dismantle the device. If a problem occurs with your device, call +1-561-994-2536 or visit www.brooklandsinc.com
• Remove batteries if a long period will occur between uses.
• Dispose batteries properly. Batteries may explode if overheated.

INTRODUCTION
Thank you for buying the VeraTemp™ Personal Non-Contact Thermometer, which has been developed using the most advanced technology. This technology allows a forehead temperature to be taken from a distance of about 5-8 cm (2-3 inches). The VeraTemp™ provides an instantaneous, accurate and hygienic temperature measurement without touching the patient. As with all types of thermometers, it is essential to use the VeraTemp™ Personal Non-Contact Thermometer properly to obtain reliable results. You are advised to read this instruction manual and follow directions carefully.
The *VeraTemp™* Personal Non-Contact Thermometer is calibrated at the factory before shipping. No calibration is necessary.

If there is a significant change in the surrounding temperature, allow the thermometer to adjust to the “new” temperature for at least 15 minutes before use in order to obtain a reliable result.

It is important to allow at least 5 seconds before repeating, or taking a new temperature measurement. This is the approximate time that the result remains on the display after a reading is taken.

**Body Temperature and Where It’s Measured**
Body temperature is a measure of the body’s ability to generate and dissipate heat. In spite of large temperature variations in the environment, the body is able to control its temperature within a narrow range.
When one is hot, the blood vessels in the skin dilate and carry the excess heat to the skin surface. You begin to sweat and as the sweat evaporates it helps to cool the body. Conversely, when the body is cold, the blood flow to the skin is decreased allowing conservation of body heat. The involuntary act of shivering causes the muscles to generate more heat that can be conserved. Under normal conditions, these reactions of the body to hot and cold keep body temperature within a narrow safe range.

Body temperature can be measured in many locations of the body. Most commonly temperature measurements are taken in the mouth, ear, armpit or rectum. For convenience and accuracy, an ideal place to measure temperature is the forehead.

**Normal Body Temperature**

Body temperature is a characteristic of a person’s metabolic condition and therefore an indication of health. Traditionally, an oral temperature of 37°C/98.6°F has been considered “normal” body temperature. In fact, this figure is a result of a centuries old study indicating the average
temperature of the study group. Body temperature is individual to the person and can vary on a healthy person by more than +/- 1°C from 37°C (98.6°F). Your body temperature is influenced by many factors including but not limited to the time of day, gender, age, ambient temperature and metabolic activity.

Because of heat loss from various parts of the body that are not covered by clothing, the normal temperature measured on a person’s forehead is usually lower than covered parts of the body. The VeraTemp™ Personal Non-Contact Thermometer’s internal software automatically adjusts the temperature to provide a reading which approximates the body temperature.

American Society for Testing and Materials (ASTM) accuracy requirements in the display range of 98°F–102°F (37°C–39°C) for infrared thermometers is +/- 0.4 °F (+/-0.2 °C), whereas for mercury-in-glass and electronic thermometers, the requirement per ASTM Standards E667–86 and E1112–86 is +/- 0.2°F (+/-0.1 °C).

This infrared thermometer meets requirements established in ASTM Standard (E1965-98). Full responsibility for the conformance of this product to the standard is assumed by Brooklands Incorporated.
# Examples of Body Temperature Measurement Ranges

<table>
<thead>
<tr>
<th>Method</th>
<th>Fahrenheit</th>
<th>Celsius</th>
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</thead>
<tbody>
<tr>
<td>Rectal</td>
<td>97.9°F – 100.4°F</td>
<td>36.1°C – 38.0°C</td>
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<tr>
<td>Tympanic (inner ear)</td>
<td>96.4°F – 100.4°F</td>
<td>35.8°C – 38.0°C</td>
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<tr>
<td>Oral</td>
<td>95.9°F – 99.5°F</td>
<td>35.5°C – 37.5°C</td>
</tr>
<tr>
<td>Axillary (Armpit)</td>
<td>94.5°F – 99.1°F</td>
<td>34.7°C – 37.3°C</td>
</tr>
<tr>
<td>Forehead</td>
<td>95.0°F – 100.4°F</td>
<td>35.0°C – 38.0°C</td>
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</table>

# Normal Body Temperatures and Age

<table>
<thead>
<tr>
<th>Age</th>
<th>Fahrenheit</th>
<th>Celsius</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 2 years</td>
<td>97.5°F – 100.4°F</td>
<td>36.4°C – 38.0°C</td>
</tr>
<tr>
<td>3 to 10 years</td>
<td>97.0°F – 100.0°F</td>
<td>36.1°C – 37.8°C</td>
</tr>
<tr>
<td>11 to 65 years</td>
<td>96.6°F – 99.7°F</td>
<td>35.9°C – 37.6°C</td>
</tr>
<tr>
<td>65 years and older</td>
<td>96.4°F – 99.5°F</td>
<td>35.8°C – 37.5°C</td>
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</tbody>
</table>
OPERATING PRINCIPLES
All objects radiate infrared energy. The intensity of this infrared energy depends on the temperature of the object. The VeraTemp™ Personal Non-Contact Thermometer measures the temperature of a person based on the energy they radiate. This measurement is taken by the external temperature probe on the device which constantly analyzes and registers the ambient temperature. When the operator holds the thermometer in place about 5-8 cm (2-3 inches) from the center of the forehead and activates the radiation sensor, the measurement is instantaneously taken.

Before using, familiarize yourself with the device.
- To measure a body temperature, point the VeraTemp 2-3 inches 5–8 cm away from the patient’s forehead and press the scan button
- There is no need to continue to hold the scan button down
- The temperature will instantly be displayed on the screen
- The screen will be green when the measured temperature is between 36.3°C and 37.3°C (97.3°F to 99.1°F)
• The screen will be **orange** when the measured temperature is between 37.4°C and 37.9°C (99.3°F to 100.2°F).

• The screen will be **red** when the measured temperature is greater than 38°C (100.4°F).

• The temperature display will remain lit for about 5 seconds after the button is released. After the display has shut off another temperature reading can be taken.

**Features**

• Specially designed to take the body temperature of a person regardless of the room temperature.
• Screen color changes related to temperature.
• Last 32 readings are automatically stored in memory.
• Backlit LCD screen, easy to read in a dark room.
• Temperature displayed in either Fahrenheit or Celsius.
• Automatic off to prolong battery life.
• Small and convenient to use.
• Body mode: human body temperature measurement 32°C to 42.9°C. (90°F to 109°F)
Temperature is out of range (too low or too high)

Display background color:

- **Green:**
  Between 36.3°C to 37.3°C (97.3°F and 99.1°F)
- **Orange:**
  Between 37.4°C to 37.9°C (99.3°F and 100.2°F)
- **Red:**
  Greater than 38°C (100.4°F)

The color change of the display is to alert the user of a potential increase in body temperature. Temperature reported on the display should be used for treatment decisions.

**NOTE:** The thermometer is set to “Body” mode at the factory.
Front:

**MODE:** Press to switch between Surface temp, Body and Room

**°C/ °F:** Press to switch between Celsius and Fahrenheit

**MEM:** Press to retrieve the last 32 readings, from most recent to oldest

**SCAN:** Press to view and record a temperature reading
Back:

Battery cover

Product label

Serial number

Model number

Two AAA batteries. Note: orientation of battery polarity
Practical Considerations When Taking Temperature

• To ensure accurate temperature measurements, it is essential that each user has received adequate information about the device and its proper use.
• Take temperature in a neutral context. The patient must not have undertaken vigorous physical activity prior to temperature measurement. Also the room temperature should be moderate 10°C to 40°C (50°F to 104°F).
• When evaluating results consider the potential for daily variations in temperature:
  » In children less than 6 months of age daily variation is small.
  » In children 6 months to 2 years old the variation is about 1 degree.
» By age 6 variations gradually increase to 2 degrees per day.
» In adults there is less body temperature variation.

To Receive a Stable Reliable Result
• Push back any hair from the forehead.
• Wipe away any perspiration on the forehead.
• Avoid drafts.
• Allow a 5 second interval between temperature measurements.
• If there is a significant change in the surrounding temperature, allow the thermometer to adjust to the “new” ambient temperature for at least 15 minutes before use.
Initial Setup

1. Remove battery door and install two AAA batteries. When batteries are new wait about 10 minutes before taking first reading.
2. Remove the display’s protective film.

How to Take a Temperature

1. Before taking a temperature, ensure the forehead is free of perspiration and that hair has been moved aside.
2. With the thermometer about 5–8 cm (2–3 inches), or about 3 finger’s width away from the forehead, press the SCAN button. The temperature is displayed instantly.

⚠️ The reliability of body temperature measurement cannot be guaranteed if measured over another part of the body (i.e. arm, torso, behind ear, etc.)
Common Errors

- If the temperature appears low, check the **MODE**. If attempting a **BODY** temperature in the **SURFACE** Temperature mode, Temperature may read 1.4-6.5°F lower than actual.

- If the screen displays while on **BODY** mode, you may be pressing the **SCAN** button before aiming at the patient’s forehead.

- If multiple attempts display the same results, you may not be waiting the 5 seconds between uses to allow the previous temperature to be completed.

- To check previous temperatures, the memory function (**MEM**) records the previous 32 scans with the temperature reading and the mode in which it was taken.
Technical Characteristics

1. Operating Temperature Range: 10°C to 40°C (50°F to 104°F) and < 85% relative humidity
2. Temperature Measurement Ranges:
   » Body mode – human body temperature measurement 32°C to 42.9°C (89.6°F to 109°F).
3. Power: DC 3 volt (two AAA batteries)
4. Size: .49 mm x 161 mm x 41 mm (1.9 in. x 6.4 in. x 1.6 in.)
5. Weight: 85 g. (3 oz) without batteries
6. Display resolution: 0.1°C (0.1°F)
7. Precision: from 36°C to 39°C +/- 0.2°C (96.8°F to 102.2°F +/- 0.4°F)
8. Consumption: ≤ 50mW.
9. Accuracy: +/- 0.2°C (0.4°F).
10. Measuring distance: 5 cm to 8 cm (2–3 inches).
11. Automatic shut-off: 5 seconds after reading.
**NOTE:** Although The VeraTemp™ Personal Non-Contact Thermometer can measure temperature below 32°C and above 42.9°C (89.6°F to 109°F) these temperature’s are outside the range in which the precision is guaranteed

**Accessories Supplied**

- User manual
- Quick start card
- Storage bag
- Two AAA batteries
## PRODUCT CODES

<table>
<thead>
<tr>
<th>PRODUCT CODE</th>
<th>DESCRIPTIONS</th>
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<tbody>
<tr>
<td>11-900</td>
<td>VERATEMP Personal Use Non-Contact thermometer</td>
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