3M™ WIBGET™ Heat Stress Monitor RSS-214 – Set Up, Use & Limitations

WBGT is a weighted sum of DRY BULB, WET BULB, and GLOBE temperatures where:

Dry Bulb Temperature (DB)
A measure of simple "ambient temperature."

Wet Bulb Temperature (WB)
A measure of evaporative cooling, including effects of airspeed and humidity.

Globe Temperature (GT)
A measure of radiant heat load including air speed effects.

Setting up the monitor:

a) Remove the WIBGET monitor from the container.
b) Hold each sensor by its connector plug
c) Align the half moon connetor with its receptacle (as indicated by the symbols on the top of the unit).
d) Wet bulb, dry bulb, globe
e) Push it firmly into place, an audible "click" will indicate full engagement.
    a. Note: do not twist the sensors once they are inserted into the base unit. Doing so may damage the sensor or sensor connector.

Prepare the Wet Bulb:

a) Fill the reservoir with distilled or demineralized water by adding room temperature water to the sponge – not the wick.
    a. Note: A bottle and demineralizer are provided with the monitor and is part of the Wet Bulb Kit, Part No. 323-5020.
b) The reservoir typically requires refilling daily, however low humidity, high temperature or high air speed conditions may require more frequent filling.
c) The wet bulb wick must remain wet during operation to help maintain the accuracy of the sensor.
d) Replace the wick or sock (Part of the Wet Bulb Kit Part No. 323-5020) at the first sign of discoloration, stiffness or poor wetting.

Monitoring Environment:

The monitor should be positioned in an open space and approximately three to six feet (one to two meters) above the floor or ground within the work area. When radiant heat is high, careful consideration must be given to shielding the dry bulb sensor. Do not expose the dry bulb to temperatures above 65° C (150° F). Use a remote sensor (see user

instructions for part choices) to monitor temperatures higher than 65° C (150° F) and relocate the base unit to a cooler area.

Note: If a connector becomes wet, it must be thoroughly dried prior to instrument usage.

Starting the Unit:

a) Turn the ON/OFF switch (located on the units upper left side) to its ON position.
b) Each time the unit is turned on it will perform a self diagnostic.
c) If, after 5 seconds, the display indicates "OUT WBGT" in ° C, the unit is ready to use.
d) If the display remains blank or an E# code appears, even momentarily, or the LO BAT indicator appears **do not use the instrument until the reason for the message is determined.**

Sensor receptacle condition test:

a) Turn the unit off.
b) Remove the sensors.
c) Turn the unit on.
d) All functions should read 0.0 ± 0.3° C (32.0 ± 0.5° F).
e) If functions read other values, do not use the unit until the reason has been determined and corrected.

Monitor Modes

Temperature: Press SELECT to toggle between temperature scales (° F/° C)

Sensor Reading: Press VIEW to scroll through the individual sensor readings.

Analog/Recorder: An analog signal proportional to the display is provided via a mini phone jack located on the monitor's lower left side. This can be connected to a compatible strip chart recorder. See the user instructions for more details.