

QUESTemp^o 44/46 Heat Stress Monitor

simplifies heat stress management efforts by providing users with real time guidance on stay times and work/rest regimens with a *newly engineered Waterless Wet Bulb sensor*.

Evaluation of heat stress and strain is based on the ACGIH TLV Handbook, U.S. Navy PHEL Charts, U.S. Marine Flag System and the EPRI Action Limits.



Causes of Heat Stress

Operations Involving:

- High air temperatures
- Radiant heat sources
- High humidity
- Strenuous physical activity
- Direct physical contact with hot objects



Typical Environments

- Military training facilities
- Athletic training & events facilities
- Commercial bakeries
- Warehousing & distribution centers
- Commercial ships, naval & submarines
- Manufacturing plants
- Power generation plants
- Shipbuilding operations



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High Quality Heat Stress Management

The QUESTemp° 44 and 46 heat stress monitors provide simplified heat stress management with upgraded high quality product features.

Features & Benefits

- Measure/calculate dry bulb, wet bulb & globe temperature, WBGT indoor/outdoor, relative humidity and Heat Index/Humidex
- Real time clock provides accurate reporting with time stamping
- Stay time measurement per ACGIH TLV Handbook, U.S. Navy PHEL charts, U.S. Marine Flag system and EPRI Action Limits (QUESTemp° 46 only)
- Optional detachable air probe (QUESTemp° 46 only)

SPECIFICATIONS FOR THE QUESTemp° 44/46

Measurements:	Globe temperature, dry bulb temperature, wet bulb temperature (calculated), % relative humidity, WBGT _{in} , WBGT _{out} , WBGT weighted average (if 3 sensor sets), and Heat Index / Humidex
Stay Times: (QT° 46 only)	Guidance is based on the screening criteria for heat stress as defined in the ACGIH TLV Handbook, U.S. Navy PHEL charts, U.S. Marine Flag system, and EPRI Action Limits
Temperature:	Celsius or Fahrenheit
Data Logging:	Reports and prints all measurements at user selected interval of 1, 2, 5, 10, 15, 30, or 60 minutes Data memory: 128K bytes
Sensors:	Shielded dry bulb sensor, 2" or 6" globe sensor, detachable WBGT sensor bar, (2) additional WBGT sensor bar input ports, on-board relative humidity sensor Optional detachable air velocity probe (QT° 46 only)
Sensor Types:	Temperature: 1000 ohm platinum RTD Humidity: Integrated circuit with capacitive polymer sensor
Housing:	Designed water resistant to a light rain or mist *If rain is frequent, remote sensor bar and keep the instrument sheltered
Size:	Height: 9.2in (23.5cm) Width: 7.2in (18.3mm) Depth: 3.0in (7.5mm) *Dimensions include mounted sensor assembly
Weight:	2.6lbs (1.2kg) with mounted sensor assembly
Accuracy:	Dry Bulb and Globe Temperature: +/-0.5°C between 0°C and 120°C Waterless Wet Bulb Temperature (calculated): Expanded measurement uncertainty of 1.1°C (k=2) between 0°C and 80°C Relative humidity: +/- 5% from 20% to 95% (non-condensing)
Operating Temperature Range:	Electronics: -5°C to 60°C
Power Options:	9V alkaline, 7.2V NiMH rechargeable pack (charged in the unit), or AC adapter wall power cube (AC adaptor will operate unit or recharge NiMH battery pack)
Battery Life:	9V alkaline: 80 hours Rechargeable Nickel Metal Hydride: 160 hours (Adding 2nd / 3rd sensor bar will decrease battery life)
Software:	QuestSuite Professional II software available for advanced analysis (charting, graphing and reporting options)
Air Probe Accessory: (QT° 46 only)	Range: 0 - 20 meters per second, 0.1m/s increments Sensor: Omni directional heated thermistor Accuracy: +/- (0.1 m/s + 4%) of measurement value Battery Life: 6-8 hours for fully charged NiMH battery Charge Time: 9 hours



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