

Philadelphia-Area Manufacturer's Heat Safety Technology Supports Athlete Protection on the World Stage

PA manufacturer Nielsen-Kellerman's WBGT Tracker helps protect elite athletes from heat stress at international soccer tournaments.

BOOTHWYN, PA, UNITED STATES, June 18, 2026 /EINPresswire.com/ -- As the world turns its attention to international soccer competition, a small but critical device made right here in the Philadelphia region is helping safeguard elite athletes from dangerous heat stress.

The [Kestrel® 5400 Heat Stress Tracker](#), manufactured by Boothwyn-based Nielsen-Kellerman (NK), is used globally by athletic trainers and sports medicine professionals to monitor environmental heat conditions, including Wet Bulb Globe Temperature (WBGT) — the gold standard measurement for heat stress risk.

During soccer tournaments governed by FIFA (Fédération Internationale de Football Association), WBGT monitoring is a key component of heat safety protocols designed to protect players from exertional heat illness. Athletic trainers rely on portable WBGT instruments like the Kestrel 5400 to make real-time decisions about hydration breaks, training modifications, and player safety.

A Local Company Protecting Global Athletes

Nielsen-Kellerman (NK), headquartered in Boothwyn, Pennsylvania, has been designing and manufacturing precision environmental instruments for more than 40 years. The Kestrel 5400 Heat Stress Tracker is proudly designed and assembled in the US and distributed worldwide.

"Heat stress can escalate quickly in high-performance environments," said Chuck Arkell, CEO of NK. "Accurate WBGT measurement gives medical and training staff objective data to make informed decisions that protect athletes."

What Is WBGT and Why It Matters

Wet Bulb Globe Temperature (WBGT) is a composite measurement that accounts for:

- Air temperature
- Humidity

- Solar radiation (radiant heat)
- Wind speed / air flow

Unlike a standard thermometer reading, WBGT reflects how environmental conditions actually affect the human body during exertion. This makes it especially important in sports like soccer, where athletes compete outdoors under intense physical demands.

When WBGT reaches certain thresholds, international governing bodies such as FIFA implement heat protocols. These typically include:

- Mandatory cooling breaks during matches
- Adjusted training schedules
- Enhanced hydration strategies
- Medical monitoring protocols

These policies are designed to reduce the risk of heat exhaustion, heat stroke, and other heat-related illnesses — conditions that can become life-threatening if not properly managed.

Supporting Evidence-Based Heat Safety

NK works closely with leading research institutions, including the Korey Stringer Institute (KSI) at the University of Connecticut. KSI is a nationally recognized authority on exertional heat illness prevention and environmental monitoring.

The partnership reflects NK's broader commitment to advancing heat safety not only in sports, but also in occupational settings such as construction, utilities, agriculture, and military training environments.

"Heat illness is 100% preventable with the right planning, education, and monitoring tools," Arkell said. "We are proud that our technology supports evidence-based decision-making at the highest levels of sport."

A Growing Focus on Heat Safety

Extreme heat events are increasing in frequency across the globe, raising awareness about heat-related risks for athletes and workers alike. In response, international sports organizations have strengthened environmental monitoring policies, placing WBGT measurement at the center of heat safety decision-making.

The Kestrel 5400 Heat Stress Tracker is widely trusted by sports medicine professionals, athletic trainers, and safety staff worldwide. For more information on heat safety in international sports visit: <https://kestrelinstruments.com/heat-safety-international-soccer>

Local Innovation with Global Impact

From a manufacturing facility just outside Philadelphia, NK's instruments are used worldwide in elite sports, industrial safety programs, military training operations, and emergency response planning.

For local viewers and readers, it's a reminder that life-saving innovation doesn't only come from Silicon Valley — it's being built right here in Delaware County.

About Nielsen-Kellerman (NK)

Founded in 1978, Nielsen-Kellerman is a Pennsylvania-based manufacturer of precision environmental monitoring instruments and performance technology. Its Kestrel line of products is trusted worldwide in sports, military, industrial, meteorological, and safety applications. All Kestrel meters are designed and built in the USA.

Kestrel Instruments, a division of NK, provides rugged, reliable weather and environmental monitoring tools for athletic fields, job sites, and various industries. Kestrel is also a recognized leader in heat stress monitoring, offering solutions and educational resources through www.heatstress.com to protect workers and athletes from heat-related risks. For more information, visit www.kestrelinstruments.com

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