This instrument was produced under rigorous factory production control and documented standard procedures. It was individually inspected and leak tested and the functioning of the display, backlight, buttons and firmware were verified. The accuracy of each of its primary measurements was individually calibrated and/or validated according to documented standard test procedures against the standards detailed below. This instrument is warranted to perform at the date of first consumer purchase in compliance with the published specifications, including stated drift since the date of manufacture, for the specific measurements and features of its model number. (See Kestrel Limited Warranty for full warranty terms.)

Standards Used in Testing

Wind Speed:
The Kestrel Weather & Environmental Meter impeller installed in this unit was individually tested in a subsonic wind tunnel operating at approximately 300 fpm (1.5 m/s) and 1200 fpm (6.1 m/s) monitored by a Gill Instruments Model 1350 ultrasonic time-of-flight anemometer. The Standard's maximum combined uncertainty is ±1.04% within the airspeed range 706.6 to 3923.9 fpm (3.59 to 19.93 m/s), and ±1.66% within the airspeed range 166.6 to 706.6 fpm (0.85 to 3.59 m/s).

Temperature:
Temperature response is verified in comparison with an Ametek DTI-050 Digital Temperature Indicator and STS Reference Sensor. The DTI-050 is calibrated annually and is traceable to NIST with a maximum relative expanded uncertainty of ± 0.40°C.

Direction / Heading
The sensitivity of the magnetic directional sensor is verified after assembly by orienting the unit to the cardinal directions and confirming the magnetic field output. The compass output is accurate to within ± 5 degrees as compared to a Suunto KB-14/360R G precision compass.

Relative Humidity:
Relative humidity is verified in comparison with an Edgetech HT120 Humidity Transmitter. The HT120 is calibrated annually and is traceable to NIST with a maximum relative expanded uncertainty of ±1.0%RH.

Barometric Pressure:
Pressure response is verified against a Vaisala PTB210A Digital Barometer. The Vaisala Barometer is calibrated annually and is traceable to NIST with a maximum relative expanded uncertainty of ± 0.3hPa.

Approved By:

Nils Steffensen, Director of Engineering
### Product Specifications for Kestrel 5400 Heat Stress Trackers

#### CALCULATED MEASUREMENTS

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<tr>
<th>MEASUREMENT</th>
<th>ACCURACY (+/-)</th>
<th>RESOLUTION</th>
<th>SENSORS EMPLOYED</th>
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<td>0.1°F/°C</td>
<td>Pressure, Relative Humidity, Globe Temperature</td>
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<tr>
<td>Barometric Pressure</td>
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<td>0.01 inHg</td>
<td>Pressure, User Input</td>
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<td>Crosswind &amp; Headwind/ Tailwind</td>
<td>±7%</td>
<td>0.1 knots</td>
<td>Wind Speed Compass</td>
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<tr>
<td>Density Altitude</td>
<td>±0.22 ft</td>
<td>0.01 ft</td>
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<tr>
<td>Dew Point</td>
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<td>0.1°F</td>
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<td>Heat Index</td>
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<td>Outdoor Wet Bulb Globe Temp</td>
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<tr>
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<td>±0.1°F</td>
<td>0.1°F</td>
<td>Wind Speed Temperature</td>
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#### ADDITIONAL PRODUCT INFO

- **Display & Backlight**: Multifunction, multi-digit monochrome dot-matrix display. Choice of white or red LED backlight.
- **Response Time & Display Update**: Display updates every 1 second. After exposure to large environmental changes, all sensors require an equilibration period to reach stated accuracy. Measurements employing RH may require longer periods particularly after prolonged exposure to very high or very low humidity, WAGT requires about 8 minutes to reach 95% accuracy and about 15 minutes to reach 99% accuracy after exposure to large environmental changes.
- **Data Storage & Graphical Display**: Logged history stored and displayed for every measured value. Manual and auto data storage. Min/Max/Avg history may be reset independently. Auto-store interval settable from 2 seconds to 12 hours, overwrite on or off. Logs even when display off except for 2 and 5 second intervals. Kestrel 5 series units hold over 10,000 data points.
- **Data Upload & Bluetooth® Data Connect Option**: Wireless range up to 100ft. Connection requires optional USB data transfer cable or Kestrel Link Dongle or Kestrel LiNK app. Employs Kestrel Link protocol for data transmission with Link supported devices. (Kestrel LiNK for iOS/Android, Kestrel Link for PC/MAC).
- **Clock / Calendar**: Real-time hours:minutes:seconds clock, calendar, automatic leap-year adjustment.
- **Auto Shutdown**: User-selectable – Off, 15-60 minutes with no key presses.
- **Languages**: English, French, German, Spanish.
- **Certifications**: CE certified, RoHS and WEEE compliant. Individually tested to NIST-traceable standards.
- **Origin**: Designed and manufactured in the USA from US and imported components. Complies with Regional Value Content and Tariff Code Transformation requirements for NAFTA Preference Criterion B.
- **Battery Life**: AA Lithium, included. Up to 400 hours of use, reduced by backlight, alert light and buzzer, or Bluetooth radio transmission use.
- **Shock Resistance**: MIL-STD-810g, Transit Shock, Method 516.5 Procedure IV; unit only; impact may damage replaceable impeller.
- **Sealing**: Waterproof (IP67 and NEMA-6).
- **Display & Battery Operational Temperature Limits**: 14°F to 131°F | -10°C to 55°C. Measurements may be taken beyond the limits of the operational temperature range of the display and batteries by maintaining the unit within the operational range and then exposing it to the more extreme environment for the minimum time necessary to take reading.
- **Storage Temperature**: -22.0°F to 140.0°F | -30.0°C to 60.0°C.
- **Size & Weight**: 6.5 x 1.9 x 1.1 in | 16.5 x 4.5 x 2.8 cm, 4.8 oz | 136 g. (Lithium battery included).