

Kestrel[®] Pocket Weather[®] Meters

Certificate of Calibration – Air Speed

Order #: 0123456
 Customer #: JOE01
 Instrument: Kestrel 5000 Environmental Meter
 Instrument Serial No: 1234567
 Calibration Date: 1-Oct-16

Customer PO#: PO243
 Customer Name: Joe Kestrel
 Manufacturer: Nielsen-Kellerman
 Impeller Serial No: IMP 7894561
 Recalibration Due: 1-Oct-17 12 Months

The above designated impeller was calibrated on the date shown in direct comparison to a Gill Model 1350 Single-Axis Ultrasonic Anemometer, Serial No. 0001. The Standard Anemometer is traceable to NIST (National Institute of Standards and Technology) and was last calibrated in the NIST Low Velocity Airflow Facility and NIST Dual Test-Section Wind Tunnel on 19-June-2015, NIST Test Report No.685-287002-15. The accuracy of the Standard is verified at regular scheduled intervals by comparison to or measurement against national standards, natural physical constants, consensus standards, or by ratio type measurements using self-calibrating techniques. The Standard's maximum combined uncertainty is $\pm 1.04\%$ within the airspeed range 706.6 to 3923.9 fpm (3.59 to 19.93 m/s), and $\pm 1.66\%$ within the airspeed range 166.6 to 706.6 fpm (0.85 to 3.59 m/s).

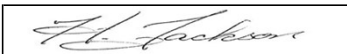
The Kestrel 5000 Environmental Meter


has a published Air Speed accuracy of \pm 3% in the range of 3.3 to 40.0 m/s

Point	Reference	Acceptable Limits				DUT as Found		Difference		
1	600.0 fpm	582.0	to	618.0	fpm	601	fpm	1.0	fpm	0.2%
2	1200.0 fpm	1164.0	to	1236.0	fpm	1150	fpm	-50.0	fpm	-4.2%
Point	Reference	Acceptable Limits				DUT as Left		Difference		
3	600.0 fpm	582.0	to	618.0	fpm	602.0	fpm	2.0	fpm	0.3%
4	1200.0 fpm	1164.0	to	1236.0	fpm	1195.0	fpm	-5.0	fpm	-0.4%

NOTES:

- Calibration was performed in a 12 x 12 in (30.5 x 30.5 cm) rectangular test section wind tunnel at an ambient temperature of $77 \pm 7^\circ\text{F}$ ($25 \pm 4^\circ\text{C}$) and $40 \pm 10\%$ relative humidity.
- Problems noted:
 - Instrument was received **in** tolerance for Air Speed.
 - Instrument was received **out of** tolerance for Air Speed.
 - No change was made to instrument.
 - Replacement Impeller, Serial No. IMP 9876543 was installed prior to "as Left" readings.
- The *maximum* recommended recalibration interval is 24 months. This instrument should be recalibrated sooner if it is frequently used at the extremes of the specified operational range. A shorter recalibration interval may also be required by user guidelines or advisable if maximum accuracy is required for the instrument application.

Technical Operator: 
 John Smith

Approved By: 
 Nils Steffensen, Director of Engineering

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The above unit was tested according to NK's procedure number: NIST Verification 2008.10.01

This calibration certificate shall not be reproduced except in full without the written approval of Nielsen-Kellerman Co.

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