

Temperature

Calibrator

Pressure

Humidity

Recorder &amp; Dataloggers

Air Flow

Level &amp; Flow

Portable Instruments

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# Kestrel Pocket Weather Meters



SPECIFICATIONS	1000	2000	2500	2500W	3000	3500	3500NV	4000
Part no.	#0810	#0820	#0825	#0825NV	#0830	#0835	#0835NV	#0840
Current Wind Speed	●	●	●	●	●	●	●	●
Max Wind Gust	●	●	●	●	●	●	●	●
Avg Wind Speed	●	●	●	●	●	●	●	●
Volume Air Flow								
Temperature		●	●	●	●	●	●	●
Wind Chill		●	●	●	●	●	●	●
Relative Humidity					●	●	●	●
Heat Stress Index					●	●	●	●
Dewpoint Temp					●	●	●	●
Wet Bulb Temp						●	●	●
Humidity Ratio								
Evaporation Rate								
Delta T								
Barometric Pressure			●	●		●	●	●
Absolute Pressure								
Altitude			●	●		●	●	●
Air Density								
Density Altitude								●
Digital Compass								
Wind Direction								
Crosswind								
Headwind/Tailwind								
Backlit Display		●	●	tactical night vision preserving	●	●	tactical night vision preserving	●
Pressure Trend			●	●		●	●	●
Data Storage & Charting								●
Data Upload								●
Clock			●	●		●	●	●

# Kestrel Pocket Weather Meters



SPECIFICATIONS	4000NV	4500	4500NV	3500 DELTA T	4100	4200	4250	4300	4400
Part no.	#0840NV	#0845	#0845NV	#0835DT	#0841	#0842	#084250	#0843	#0844
Current Wind Speed	●	●	●	●	●	●	●	●	●
Max Wind Gust	●	●	●	●	●	●	●	●	●
Avg Wind Speed	●	●	●	●	●	●	●	●	●
Volume Air Flow					●	●			
Temperature	●	●	●	●	●	●	●	●	●
Wind Chill	●	●	●		●	●		●	●
Relative Humidity	●	●	●	●	●	●	●	●	●
Heat Stress Index	●	●	●		●	●		●	●
Dewpoint Temp	●	●	●	●	●	●	●	●	●
Wet Bulb Temp	●	●	●	●		●		●	●
Humidity Ratio						●	●		
Evaporation Rate								●	
Delta T				●					
Barometric Pressure	●	●	●	●		●		●	●
Absolute Pressure							●		
Altitude	●	●	●	●		●		●	●
Air Density							●		
Density Altitude	●	●	●			●	●	●	●
Digital Compass		●	●						●
Wind Direction		●	●						●
Crosswind		●	●						●
Headwind/Tailwind		●	●						●
Backlit Display	tactical night vision perserving	●	tactical night vision perserving	●	●	●	●	●	●
Pressure Trend	●	●	●			●	●		●
Data Storage & Charting	●	●	●		●	●	●	●	●
Data Upload	●	●	●		●	●	●	●	●
Clock	●	●	●	●	●	●	●	●	●

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# Kestrel Pocket Weather Meters

SPECIFICATIONS	ACCURACY (+/-)	SPECIFICATION RANGE
Wind Speed (Air Velocity)	Larger of 3% of reading or least significant digit	0.4 to 40.0 m/s
Air Flow	3% of reading	0.0 to 9,999.9 m <sup>3</sup> /s
Temperature	1.0°C	-29.0 to 70.0°C
Relative humidity	3.0% RH	5.0 to 95% non-condensing
Evaporation rate	Typical: +/- 0.1 kg/m <sup>2</sup> /hr	0.00 to 5.00kg/m <sup>2</sup> /hr
Pressure	0.02 PSI	At 25.0°C, 750 to 1100hPa/mb
Attitude	15m	At 25.0°C, <6,000 m. Max error +/- 30m
Crosswind, Headwind, Tailwind	5%	3.8 to 40.0 m/s
Wind Chill	1.0°C	0.4 to 40 m/s, -45.6 to 10.0°C
Heat Index	2.0°C	21.1 to 54.4°C, 0 to 100% RH
Dewpoint	2.0°C	-29.0 to 70.0°C, 20.0 to 95.0% RH
Wet Bulb Temperature	2.0°C	0.0 to 37.8°C, 5.0 to 95.0% RH -2000.0 to 9000 hPa, <6000 m
Humidity Ratio	typical accuracy 10%	-29 to 54°C, 5 to 95%RH, 300.0 to 1100.0 hPa
Density Altitude	75	0.0 -37.8°C, 5.0 to 95.0%RH, -2000 to 9000 hPa, <6000 m
Data Storage/ Display	Minimum, maximum, average and logged history stored and displayed for every measured value. 2000-point data logger with graphical display (4200 logs 1600 data points, 4300 logs 1800 points, 4500 logs 1400 data points). Auto data storage; interval settable from 2 seconds to 12 hours. Manual data capture.	
Data Upload	Requires optional PC interface (NK PN-0830) and provided software. RS-232 connection with USB adapter available.	
Display Backlight	Aviation green electroluminescent backlight. Choice of aviation green or visible red (4000 & 4500 only) electroluminescent backlight. Automatic or manual activation.	
Operational Temperature Range	-10°C to 55°C	
Storage Temperature	-30°C to 60°C	
Certification	CE certified. Individually tested to NIST-traceable standards (written certificate of tests available at additional charge).	
Batteries	CR2032, one, included. Average life, 300 hours of use, +/- depending on backlight use. AAA Alkaline, two, included. Average life, 400 hours of use, +/- depending on backlight use.	
Environmental	Waterproof (IP67 standard). Drop-tested (MIL.STD.810F; unit only. Substantial impact may damage replaceable impeller.)	

# Kestrel Pocket Weather Meters



Model No	5000	5100	5200	5400	5500
Primary Use	Environment	Racing	Professional	Heat Stress	Weather
Wind Speed	•	•	•	•	•
Temperature	•	•	•	•	•
Wind Chill	•	•	•	•	•
Rel. Humidity	•	•	•	•	•
Heat Stress Index	•	•	•	•	•
Dewpoint Temp.	•	•	•	•	•
Wet Bulb Temp. (WBT)	•	•	•	•	•
Station Pressure	•	•	•	•	•
Barometric Pressure	•	•	•	•	•
Altitude	•	•	•	•	•
Density Altitude	•	•	•	•	•
Wind Direction				w/ vane mount & tripod	•
Crosswind				w/ vane mount & tripod	•
Head/Tail Wind				w/ vane mount & tripod	•
Moisture Content		•	•		
Air Density		•	•		
Relative Air Density (RAD)		•	•		
Evap. Rate			•		
Vol. Air Flow			•		
Delta T			•		
Wet Bulb Globe Temp.				•	
Thermal Work Limit				•	
Globe Temp.				•	
Naturally Aspirated WBT				•	
Digital Compass				optional	•

SENSORS			
SENSOR	ACCURACY (+/-)	RESOLUTION	SPECIFICATION RANGE
Wind Speed   Air Flow	Larger of 3% of reading, least significant digit or 20 ft/min	0.1 m/s 1 ft/min 0.1 km/h 0.1 mph 0.1 knots 1 B* 0.1 F/S*	0.6 to 40.0 m/s 118 to 7,874 ft/min 2.2 to 144.0 km/h 1.3 to 89.5 mph 1.2 to 77.8 knots 0 to 12 B* 2-131.2*
Ambient Temperature	0.9 °F 0.5 °C	0.1 °F 0.1 °C	-20.0 to 158.0 °F -29.0 to 70.0 °C
Relative Humidity	±2%RH	0.1 %RH	10 to 90% 25°C non-condensing
Pressure	±1.5 mbar at 25°C, 700-1100 mbar/ ±0.04inHg at 77°F 20.67-32.48 inHg/ ±0.022 PSI 10.15-15.95 PSI	0.01 inHg 0.1 hPa/mbar 0.01 PSI	25°C/77°F, 700-1100 mbar/20.67-32.48 inHg/10.15-15.95 PSI
Compass	±5°	1° 1/16th Cardinal Scale	0 to 360°

ADDITIONAL PRODUCT INFO	
Battery Life	AA Lithium, included. Up to 400 hours of use, reduced by backlight 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.
Size & Weight	5.0 x 1.9 x 1.1 in / 12.7 x 4.5 x 2.8 cm, 4.3 oz / 121 g. (Lithium battery included)

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# Kestrel Accessories



### Replacement Impeller

Every Kestrel features a patented user-replaceable sapphire jewel bearing impeller. The Kestrel impeller is highly accurate and will take readings as low as 0.3 meters per second. After extensive use (approx. 400 hours), or use at speeds over 60 mph, the impeller's accuracy may be reduced slightly. This replacement impeller is necessary only when the original impeller is damaged or worn.



### Computer Interface for use with the Kestrel 4000 series models

With the addition of the Interface, any Kestrel 4000 series meter becomes a complete weather station and data logger.

Data can be uploaded for long-term storage, in-depth analysis and detailed charting. It also has a tripod mount, allowing the Kestrel to be mounted for continuous data logging. Simply connect the interface cable to your computer, rest the Kestrel on the cradle, and upload your stored data. The included software is easy to use, and saves the data in a comma delimited textfile for use in a text editor, spreadsheet or database.

The provided software works with PC (Windows 3.0 or higher). The interface is available with either an RS-232 9-pin serial connector or a USB connector.



### Weather Interface - USB Port

The Kestrel USB Interface transforms any Kestrel 4000-series meter into a weather station and data logger. Simply connect the interface into the proper USB port on your computer, rest the Kestrel 4000, 4100, 4200 or 4500 on the cradle, and upload the data. With the easy-to-use software you are able to view the data in a text editor, spreadsheet or database.



### Weather Collapsible Tripod

Compatible with the Portable Vane Mount and any Kestrel Meter, the Kestrel Collapsible Tripod makes for easy, hands-free measuring out in the field. Extend the tripod to 51" and collapse it to 14". Easily carry the Collapsible Tripod thanks to its lightweight 1.7 lbs. Using the Collapsible Tripod, Vane Mount, and USB Interface together transforms your Kestrel Meter into a portable weather station.



### The Kestrel Portable Vane Mount

The Kestrel Portable Vane Mount is an ingeniously simple accessory designed for extreme light weight and portability. The Vane Mount assembles in seconds and the precision pivot and lightweight vane extension allows the unit to spin freely in the slightest of breezes. The incorporated level ensures that the Vane Mount is installed correctly and that direction readings will be accurate.

The Vane Mount is compatible with all Kestrel models. And paired with the Kestrel's 2000 data-point memory log, extensive data can be collected including wind speed and direction.

Together, the Kestrel 4500 and Vane Mount weigh less than 8 ounces (227 g.) and pack into a compact 2 x 6 inch (5 x 15.25 cm) case, which protects the Vane Mount pieces and Kestrel Meter. The Vane Mount can be affixed to any tripod for a complete weather station you can easily pack into remote locations.

MODEL	DESCRIPTION
0801	Replacement Impeller
0804	SER Computer Serial
0804	USB Computer Interface (USB)
0792	Weather Collapsible Tripod
0791	Portable Vane Mount

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