

Kestrel® 4500 POCKET WEATHER TRACKER

FUNCTIONS

- Wind Speed
- Wind direction
- Crosswind
- Headwind / tailwind
- Heading (true and magnetic)
- Temperature
- Wind Chill
- Relative humidity
- Heat index
- Dew point
- Wet bulb temperature
- Barometric pressure
- Altitude
- Density altitude
- Time & Date



Kestrel 4500 with optional Vane Mount

FEATURES

- High accuracy
- Wide operating range
- Compact, rugged design
- User-replaceable, precision Zytel® mounted impeller
- Fast response temperature sensor

- Easy to read back-lit display option of olive drab NV version with low intensity red backlight
- Min/max/average values or graphical data
- User selectable units and language
- User customisable screens

- Data logging - up to 2900 readings
- Data upload (with optional PC interface or integrated Bluetooth® wireless technology)
- Runs from 2 AAA batteries (supplied)
- Available in yellow or olive drab

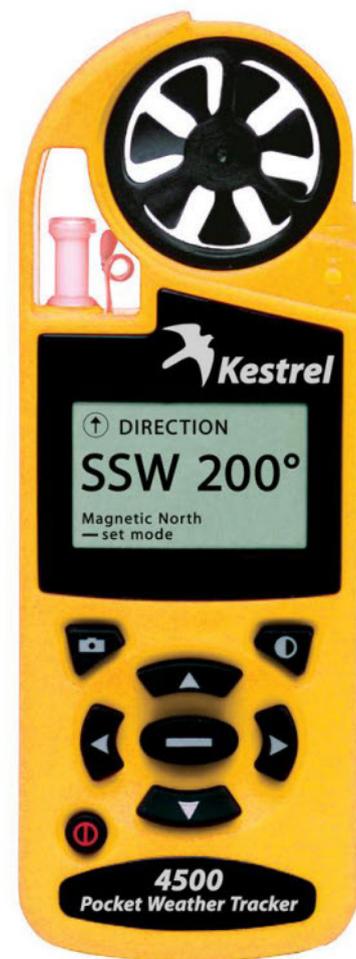


K4500NV



Bluetooth® model available

Ideal for streaming real-time data to laptop or PDA



actual size (A4 page)

The Kestrel 4500 Pocket Weather Tracker is a complete weather instrument, offering all the features of the Kestrel 4000 with instant and accurate measurement of wind speed, temperature, humidity and barometric pressure and numerous other derived functions.

In addition, the Kestrel 4500 has a built in digital compass. This allows you to track and log wind direction as well as wind speed. The wind direction is displayed in degrees and cardinal compass points. By setting a reference target or runway heading, the Kestrel 4500 will automatically calculate crosswind, headwind and tailwind when measuring the wind speed. The digital compass can also be used to display forward heading with reference to either magnetic or true north.

At the touch of a button environmental conditions are clearly shown in digital or graphical form. Individual functions can be displayed in three different formats: current, minimum/maximum/average and chart. There are also three user screens, which can be customised to simultaneously display the three most appropriate functions for the application.

Combined with the optional Vane Mount and Mini Tripod, the Kestrel 4500 becomes a complete weather station. This is ideal for use in remote locations for short term weather monitoring, being extremely light-weight and portable.

For those with after dark requirements, the Kestrel 4500NV (with an olive drab case) is available with a low intensity red backlight to preserve night vision.

The Kestrel 4500 can be set up to log data automatically (as well as manually) at programmable intervals, in order to display a history of weather information. Graphs display up to 2900 data points and the value, time and date of capture point can be shown. The stored data can also be uploaded to a PC, for analysis/storage with the optional Kestrel Interface and Communicator software.

High precision Zytel® bearings and a lightweight impeller provide accurate air flow measurements and the ability to operate at speeds as low as 0.6 m/s. The impeller is user-replaceable in case of damage, also ensuring high accuracy levels are maintained for life. An integral flip-open hard cover protects the impeller when not in use.

The Kestrel 4500 is powered by two easily replaceable, AAA batteries and has two power saving modes to prolong battery life. All text can be displayed in one of five languages: English, French, Italian, Spanish or German.

Every Kestrel 4500 is individually calibrated before it leaves the factory and comes with a free Certificate of Conformity.





TECHNICAL SPECIFICATION

Physical	Dimensions	127mm x 45mm x 28mm			
	Weight	102g			
	Lanyards	0.2m and 0.5m (for wrist and neck)			
	Case colour	Options of yellow or olive drab for NV version			
Display	Display type	Dot matrix LCD with electro-luminescent backlighting			
	Display update	1 second			
	Data logging	Programmable 2 second to 12 hour intervals, 2900 data points with graphical display. Manual data capture. Data upload with optional PC interface. Bluetooth models only: Integrated Bluetooth wireless data transfer with adjustable range from 5 to 30 feet.			
	Functions	Wind speed (current, maximum and average)			
		Wind direction	Calculated Dew Point		
		Crosswind	Barometric pressure		
		Headwind / tailwind	Altitude		
		Temperature	Density altitude		
		Wind Chill equivalent temperature	Wet bulb temperature		
		Relative Humidity	Digital compass		
	Heat Index	Time and date			
	Speed units	kt, m/s, km/h, mph, ft/min, Beaufort Force (B)			
	Direction units	°, cardinal points			
Temperature units	°C, °F				
Pressure units	mbar, inHg, hPa, psi				
Altitude units	m, ft				
Date and time display	dd/mm/yy, mm/dd/yy, 12 hour, 24 hour				
Performance	Speed (1 sec response)	Operational range	0.6m/s to 60m/s (1.3 to 135.0mph)		
		Specification range	0.6m/s to 40m/s (1.3 to 89.0mph) Start-up speed stated as lower limit, readings may be taken down to 0.4 m/s 79 ft/min 1.5 km/h .9 mph .8 kt after impeller start-up.		
		On axis accuracy	± 3% of reading or ± 0.1 m/s. (Some loss of accuracy from bearing wear may occur with sustained operation at or near maximum speed)		
		Off -axis response	-1% @ 5°, -2% @ 10°, -3% at 15°		
		Calibration drift	<1% after 100hrs operation at 7m/s		
		Resolution	0.1 kt, m/s, km/h, mph. 1 FPM below 1999 FPM, 10 FPM above 2000 FPM. 1 Beaufort (0 to 12)		
	Wind Direction / Forward Heading (1 sec response)	Operational range	360°		
		Specification range	0 to 360°		
		Accuracy	±5°		
	Temperature (1 sec response)	Resolution	1°, 16 points		
		Operational range	-45.0°C to +125.0°C		
		Specification range	-29.0°C to +70.0°C		
		Accuracy	±1°C		
	Relative Humidity (1 min response)	Resolution	0.1°		
		Wind chill accuracy	±1.0°C (from wind speed and temperature)		
		Operational range	0% to 100%		
		Specification range	5% to 95% non-condensing		
		Accuracy	±3% (when unit allowed to equilibrate to external temperature)		
		Calibration drift	±2% over 24 months (correctable)		
		Dew point accuracy	±2°C (above 20% relative humidity)		
		Heat index accuracy	±2°C (between 21.1°C and 54.4°C)		
		Barometric Pressure (1 sec response)	Resolution	0.1 mbar	
			Operational range	10 to 1100 mbar at 25°C	
	Specification range		750 to 1100 mbar at 25°C		
	Accuracy		±1.5 mbar (max error over range 0°C to 70°C: ±2.0 mbar)		
	Calibration drift		Typically ±1 mbar per year (correctable)		
	Altitude (1 sec response)	Wet bulb temperature accuracy	±2°C (between 0°C and 37.8°C)		
Density altitude accuracy		±75m (between 0°C and 37.8°C)			
Operational range		-2000m to +9000m (-6000 ft to +30,000 ft)			
Specification range		-2000m to +6000m at 25°C			
Sensors	Accuracy	±15m (max error out of spec range: ±30m)			
	Resolution	1m or 1ft			
	Impeller	Diameter 25mm. High precision axle and low-friction Zytel® bearings. Replacement impeller field installs without tools.			
	Temperature	Air, water or snow temperature. Hermetically-sealed, precision thermistor mounted externally and thermally isolated for rapid response. Airflow of 2.2 mph 1 m/s or greater provides fastest response and reduction of insulation effect. Calibration drift negligible.			
	Relative Humidity	Polymer capacitive sensor, mounted externally in thin-walled chamber			
	Pressure	Monolithic piezo-resistive silicon based sensor with second-order temperature correction			
Environmental	Compass	2-axis solid state magneto-resistive sensor. Declination/variation adjustable for true north readout. Self calibration routine			
	Sealing	Electronics enclosure IP67 and NEMA-6 [Water resistant]			
	Shock	Drop tested (MIL-STD.810F - unit only)			
	Temperature	Operating range: -10°C to +55°C (for LCD readability and batteries) Storage range: -30°C to +60°C			
Miscellaneous	EMC	CE marked			
	Battery	2 off AAA alkaline, included, user replaceable			
	Battery Life	400 hours of use, average, ± depending on backlight use			
	Auto switch off	Selectable to remain switched on or switch off 15 or 60 minutes after last key press			
	Wind chill equivalent temperature calculation	Perceived temperature resulting from combined effect of wind speed and temperature. Utilises the (US) NWS Wind Chill Temperature (WCT) Index, revised 2001, with wind speed adjusted by a factor of 1.5 to yield equivalent results for wind speed measured at 10m above ground			
	Heat Index calculation	Steadman, from temperature and relative humidity			
	Certification	Wind speed, temperature, pressure and humidity measurements are tested during manufacture. A certificate of conformity (C of C) is included with each Kestrel. Calibration certificates are available for an additional fee.			
Guarantee	5 years				

This information is subject to change