

FUNCTIONS

- Air velocity
- Volume air flow
- Temperature
- Wind Chill
- Relative humidity
- Heat index
- Dew point
- Wet bulb temperature
- Humidity ratio
- Barometric pressure
- Altitude
- Density altitude
- Time & Date

FEATURES

- High accuracy
- Wide operating range
- Compact, rugged design
- User-replaceable, precision Zytel®-mounted impeller
- Fast response temperature sensor
- Easy to read digital back-lit display
- Min/max/average values or graphical data
- User selectable units
- User customisable screens
- Data logging
- Data upload (with optional PC interface or integrated Bluetooth® wireless technology)
- Runs from 2 AAA batteries

Calibrated instruments available for ventilation testing to Part F of the Building Regs



Bluetooth® model available

Ideal for streaming real-time data to laptop or PDA



The Kestrel 4200 Pocket Air Flow Meter has been designed specifically for HVAC applications, allowing instant and accurate readings of air flow and key environmental conditions in one compact instrument.

Ideal for HVAC technicians, building services, facilities & maintenance engineers and Health & Safety – the Kestrel 4200 offers a multitude of features to help monitor ventilation, heating and air-conditioning installations efficiently and easily.

The Kestrel 4200 features automatic volume air flow measurement in litres/sec. Simply enter the duct shape and dimensions, hold the Kestrel 4200 in the air stream and the volume air flow readings are displayed - no calculator required! The convenient averaging mode ensures accurate readings in any airflow or duct size and shape.

On-screen customisation allows each technician to personalise their 4200 to display the most appropriate functions for the application.

The Kestrel 4200 also features a powerful data logger that records 3600 sets of measurements at user-selectable time intervals. Review the logged data with the 4200's onscreen graphing capabilities, or upload to a PC for in-depth

analysis. Select a *Bluetooth* model for easy wireless transfer of data or use the optional Kestrel PC Interface unit.

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 metres a second. The impeller is user-replaceable in case of damage, also ensuring high accuracy levels are maintained for life. An integral hard cover protects the impeller when not in use.

A fast response, external temperature sensor ensures accurate readings. The 0.1 degree resolution of the display aids in determining when a consistent temperature has been reached.

Important relative humidity measurements are instant and accurate in any environment due to the patented dual chamber temperature sensor.

The Kestrel 4200 Pocket Air Flow Meter is as accurate and comprehensive as other instruments costing far more. Like all the other Kestrel meters, its quality is backed up by a five-year manufacturer's warranty. Units are waterproof and float, are rugged and drop tested and include five language options.

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Kestrel® 4200 POCKET AIR FLOW METER



Kestrel 4200 Technical Specification

Physical	Dimensions	127mm x 45mm x 28mm		
	Weight	102g		
	Lanyards	0.2m and 0.5m (for wrist and neck)		
	Case colour	Safety orange		
Display	Display type	Dot matrix LCD with electro-luminescent backlighting		
	Display update	1 second		
	Data logging	Programmable 2 second to 12 hour intervals, 3600 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	Air velocity (current, maximum and average)	Calculated Dew Point	
		Volume air flow	Wet bulb temperature	
		Air temperature	Humidity ratio	
		Wind Chill equivalent temperature	Barometric pressure	
		Relative Humidity	Altitude	
		Heat Index	Density altitude	
	Velocity units	kt, m/s, km/h, mph, ft/min, Beaufort Force (B)		
	Flow units	l/s, m³/s, m³/min, m³/hr, ft³/min		
	Temperature units	°C, °F		
	Relative humidity units	%		
	Pressure units	mbar, inHg, hPa, psi		
Altitude units	m, ft			
Humidity ratio units	g/kg, gpp			
Duct/opening	cm, m, in, ft			
Shape of duct	Circular (diameter), rectangular (length and width)			
Date and time display	dd/mm/yy, mm/dd/yy, 12 hour, 24 hour			
Performance	Air velocity (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)		
	Air flow accuracy	± 3% of reading		
	Temperature (1 sec response)	Operational range	-45.0°C to +125.0°C	
		Specification range	-29.0°C to +70.0°C	
		Accuracy	±1°C	
		Resolution	0.1°	
	Wind chill accuracy	±1.0°C (from wind speed and temperature)		
	Relative Humidity (1 min response)	Operational range	0% to 100%	
		Specification range	5% to 95% non-condensing	
		Resolution	0.1%	
		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)	Operational range	10 to 1100 mbar at 25°C	
		Specification range	750 to 1100 mbar at 25°C	
		Resolution	0.1 mbar	
		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)	Operational range	-2000m to +9000m (-6000 ft to +30,000 ft)		
	Specification range	-2000m to +6000m at 25°C		
	Accuracy	±15m (max error out of spec range: ±30m)		
	Resolution	1m or 1ft		
Wet bulb temperature accuracy	±2°C (between 0°C and 37.8°C)			
Density altitude accuracy	±75m (between 0°C and 37.8°C)			
Humidity ratio accuracy	±10% (typical, between -29°C and +54°C)			
Sensors	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		
	Barometric pressure	Monolithic piezo-resistive silicon based sensor with second-order temperature correction		
Environmental	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		
	EMC	CE marked		
Miscellaneous	Battery	2 off AAA alkaline, included, user replaceable		
	Battery Life	Average expected life: 400 hours of active screen, monitoring and logging use, reduced by backlight and Bluetooth 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	Air velocity, 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			

The manufacturer reserves the right to amend the specification and therefore the information in this document may be subject to change. Please check our website www.r-p-r.co.uk for details