# **SECOND WIND | TRITON SONIC WIND PROFILER SPECIFICATIONS**







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#### **DATA CAPTURE**

Maximum height	200 m
Wind data capture heights	40, 50, 60, 80, 100, 120, 140, 160, 180, 200 m
Wind speed range	0–25 m/s (0–55 mph)
Data recovery rate (unfiltered)	>98% (at all heights)
Filtered data recovery rate*	>95% at 60 m; >90% at 80 m (with >90% Quality Factor
Filtered data correlation	Within 2% of anemometers
Data upload rate	Every 10 minutes, via communications link Automatic data buffering and backfilling protocol.
SD memory card socket	2 GB SD card records a minimum of 2 years of 10 minute data.

<sup>\*</sup>Filtered data recovery rate represents the percentage of Triton data with a Quality Factor >90% averaged over a 12-month period to account for seasonal and diurnal effects. Application of a minimum QF of 90% removes low quality data associated with atmospheric stability, atmospheric absorption, and precipitation events. The Triton's Filtered Data Recovery Rate is equivalent to "directionally filtered data" from met tower mounted anemometers.

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Dimensions in inches [cm], rounded to the nearest unit. Solar panels and mounting hardware not shown.

### **POWER SUPPLY**

Power consumption	7 W (average)
Solar panels	2 panels, each rated @ 85 W
Internal batteries	Leak-proof AGM marine batteries, rated
	12V, 92 Ah.
Battery capacity	Internal shipping-safe mounting system
	holds up to 4 batteries, for 20 days of
	operation without charging. (See note
	under "Mirror Heater System/Battery
	Capacity")

#### **INSTALLATION**

Footprint	$2 \text{ m} \times 3 \text{ m}$ (6' $\times$ 9') with solar panels fitted
Orientation	Dual-axis accelerometer for automatic
	correction for out-of-level. Site location
	determined by GPS.
Leveling of base	Within 3° of level in x and y axes

#### **OPERATION**

Ambient temperature	$-40^{\circ}$ C to $+65^{\circ}$ C ( $-40^{\circ}$ F to $+150^{\circ}$ F)
Frequency of	4,500 Hz (nominal), with automatic
sound beams	temperature correction
Number of sound beams	3
Data sampling rate	~100 'chirps' per sound beam per 10
	minute period
Duration of sound 'chirp'	60–100 milliseconds
Sound level at ear level	87 dBa at 0m; 63 dBa at 50m (intermit-
	tent sound source)

## **TRANSPORTATION**

Dimensions	2 x 2 x 2 m (6' x 6' x 6'). 1.2 m (3' 11")
	wide base fits pick-up truck bed or trailer
Weight	350 to 450 kg (750 to 1000 lbs.)
	depending on configuration
Integrated shipping	Triton and all accessories ship as one unit

#### MIRROR HEATER SYSTEM

Energy source	LPG (propane)
Storage capacity	Triton enclosure has nesting locations for
(to be provided	(1) 18 kg (40 lbs.) and (1) 14 kg (30 lbs.)
by the customer)	LPG bottles with a combined capacity of
	32 kg (70 lbs.).
Run time	Up to 200 hours of snow melting with 32
	kg (70 lbs.) internal propane supply.
Heater control	Intelligent system with satellite control
	capacity
Battery capacity	For heater-equipped Tritons, frequent
	heater activations will reduce the time
	of battery operation without a charging
	event.

# **Configurations**

#### STANDARD TRITON

Includes 2 batteries, 2 solar panels, Globalstar modem and antenna, and 4 screw-in ground anchors.

#### TRITON WITH MIRROR HEATER

Above, plus complete mirror heater system.

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