

## Specifications

**Minimum Stem Diameter:**  
8 cm

**Maximum Stem Diameter:**  
no limit

**Increment Range:** 65 mm

**Resolution:** 0.001 mm

**Linearity:** 2% of full scale

**Temperature Measurement Accuracy:**  
+/- 2 oC

**Memory Capacity:**  
50,000 readings or 4 years at hourly intervals

**Battery Capacity:**  
Approx 5 years at hourly intervals

**Communications:**  
Infrared

**Tightening Strength:**  
15 to 20 N

**Weight:** 450 gm

**Tape Spool Length:** 15 m

**Tape Spool Width:** 12 mm

# Logging Band Dendrometer

Whole tree water relations research has just become easier and more accurate. The logging band Dendrometer now incorporates its own self-contained datalogger. Using an internal lithium battery there is no need for external batteries or solar panels to power the logger meaning it can be attached to a tree and set logging with no other accessories or requirements.

Such independence means multiple trees throughout an experimental site can be continuously logged over a much larger area than if they were required to be connected to a central logging system. Small trees, large trees, neighbouring trees or very distant trees can now easily be measured without physically limiting design constraints. The DRL26 logging dendrometer is very reliable and low cost method of accurately measuring and monitoring tree growth rates.



Tree growth rate data becomes more accurate because a larger spatial average can be made as well as replication across a large range of trees sizes. The data collected is of



the highest accuracy with a measurement resolution of 1 micron in stem diameter change. Such resolution accurately allows for interpretation of diurnal stem fluctuations in response to climatic and micro-environmental effects in addition to long term growth.

Diurnal stem fluctuations data can then be combined with sapflow data from the same tree to correlate water use to further understand functional hydrology of the tree and or specific treatment effects.

## Features

The DRL26 features a non-invasive attachment to the tree using a rotary position sensor to make a step-less reading of stem diameter and growth. The built in datalogger has a memory capacity of 50,000 readings which, at hourly logging intervals, provides 4 years worth of data storage. The internal lithium battery ensures 5 years operation at the same hourly logging interval. The logger is environmentally sealed utilising an Infrared communications link, completely removing the worst waterproofing weak spot of any logger, the serial port. Finally, a sophisticated Windows-based software package allows configuration of the logger plus detailed statistical analysis of the data making the DRL26 the only solution for dendrometry research.

## Ordering Information

DRL26	Logging Band Dendrometer
DBTAPE	Dendrometer Tape 15 m spool



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