

IN SHORT

The CADNO system is based on the well-established scanning micrometer roll Calliper – transformed by innovative electronics and software. The rugged, self-contained instrument - which has a proven track record – is easy to use having been designed for continuous use in the harsh conditions of the average roll shop or mill. Additional plug-in modules, carried as recommended spares, allow front-line maintenance by production staff, thus maximising availability. The accompanying display, printing and archiving station provides attractive on-screen graphics and an A4 sized hard copy of the roll profile together with other recorded information for sending forward with the roll as a guarantee of grinding performance. The price is considerably less than an average pair of rolls and will be recouped in a very short time through better roll usage and improvements in product quality.

Roll Profile Quality Assurance



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**METROLOGY SYSTEMS
WALES**
CADNO ROLL INSPECTION &
MANAGEMENT SYSTEM

Accurate Roll Measurement



Simply the Best *Roll Measurement!*

CADNO ROLL INSPECTION & MANAGEMENT SYSTEM

The CADNO system for roll inspection and management employs the latest technology for the accurate and effective measurement of rolls. The complete system comprises one or more **Electronic Callipers** used in conjunction with a **Display, Printing and Archiving Station**.

ELECTRONIC CALLIPER

The best features of the well-established scanning micrometer are combined with advances in electronic and software engineering. The result is a rugged, accurate and versatile measuring instrument. Close co-operation with the manufacturers of wide strip steel & aluminium and paper industry, throughout the development, has ensured a final product that is a match for the harshest conditions likely to be encountered. Availability is further enhanced by the modular design.

Precision gauging module

The variation in roll diameter along the barrel is measured using a plug-in precision gauging module. The sensor is a linear variable displacement transducer (stroke 2mm, linearity better than 0.3%, repeatability: better than 0.1 micron). The design allows fine radial adjustment & clamping whilst offering protection against damage and over-travel.

Encoder Module

Distance along the barrel is measured by means of a plug-in rotary encoder module (100 pulse/rev) directly coupled to a precision polyurethane tyred wheel (100mm circumference). The wheel shaft is supported by two miniature sealed ball bearings. The design permits measurement right to the ends of the roll.

“More than a measuring instrument – A versatile roll management system that can be tailored to your needs”

Microcomputer based module

The on-board microcomputer-based module for control, signal processing, display and recording makes use of a fast analogue to digital converter. The operator interface is remarkable for its robust simplicity: three push buttons, and two 4-digit, 7-segment bright red light-emitting diode displays. Rugged plugs and sockets are used to connect the gauging and encoder modules (and 12-volt battery supply) to this easily replaced unit. The measured data – variation in diameter versus distance across the barrel – are stored using a plug-in battery-backed CMOS SRAM memory card. On completion of a traverse there is an option to play back 21 equi-spaced averaged readings (as favoured by the paper industry.)

DISPLAY PRINTING AND ARCHIVING STATION

Although the CADNO electronic calliper is a self-contained inspection tool, the scope for improved quality control is greatly enhanced if it is used in conjunction with a desktop computer-based **display, printing and archiving station**. Transference of the plug-in memory card from the Calliper to this station brings into play a range of sophisticated computer graphics for the presentation of the roll profile. There is a full choice of scales to allow convex, concave and parallel traces to be displayed to best advantage, together with other required reference data (e.g. roll number, stand number etc.). The Microsoft Windows based software prompts the operator to enter this associated information for inclusion on a customised header to the graph. These data are available for subsequent analysis and presentation of grinding performance etc.

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TECHNICAL SPECIFICATION

The callipers are produced in the following measurement ranges:

Mm	Inches	Part number
100-450mm	4-17in	E559770
275-825mm	11-32in	E559772
700-1300mm	28-50in	E559774
1150-1650mm	45-65in	E559776