

# PRO-MIC

## PRO-MIC Roll Measurement Systems

*Reliability, Repeatability and 3 Button Operation*



### PRO-MIC Lightweight

In less than one minute, a electronic PRO-MIC System II can skate the length of a roll body and generate an accurate hard copy roll profile report. Using simple three-button keypad menu selections, the PRO-MIC System II user can configure the unit to suit their specific needs.

All PRO-MIC System II Models provide:

- ...all Digital measurement - No Calibration.
- ...a live readout while skating.
- ...are self zeroing to save time.
- ...calculate actual crown - adjusting for taper.
- ...plot the difference between the two profile halves - symmetry.
- ...provide automatic scaling of the profile plot or choices of manual scales.
- ...guaranteed repeatable to  $\pm 0.0001"/0.025mm$ .

PRO-MIC System II can also:

- ...measure change in diameter 10x per inch or each 2mm.
- ...measure 1000 data points to a standard resolution of 20 millionths of an inch (0.0005mm) or an optional resolution of 5 millionths (0.0001mm).
- ...measure rolls from 1" to 64" (25 to 1600mm)
- ...measure crowns up to 0.400"/10mm
- ...plot the profile with and without taper.
- ...mark the crown location on the profile chart.
- ...measure in Inches or Millimeters.

Standard Size Ranges:  
 4" to 22" (100/560mm)  
 8" to 32" (200/800mm)  
 8" to 40" (200/1015mm)  
 12" to 50" (305/1270mm)  
 16" to 64" (400/1600mm).

(See TN-018)



### PRO-MIC TRUE End-to-End

The patented PRO-MIC TRUE End-to-End offers a complete solution to the problem of "lost crown" readings obtained by measuring less than the full length of the roll body.

This version is equipped with two crossarm assemblies, two measurement probes and an exclusive PRO-MIC electronics package to allow the entire roll profile to be measured in a single pass.

It gives an improved evaluation of roll shape since the outputs of the two measurement probes are averaged for the majority of the measurement. No special operator skills, training or manual dexterity are required. (See TN-009)



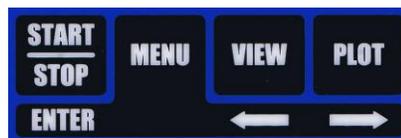
### PRO-MIC Low Clearance

The PRO-MIC Low Clearance Systems are designed to measure rolls in place. Profiles of rolls in processing lines, rubber calenders, paper machines and assembled rolling mill rolls can now be measured.

The Low Clearance PRO-MIC is designed with a rigid frame which closely follows the diameter curve of the roll surface. Low Clearance systems can fit in as little as 35mm (1.375").

The System uses opposed PRO-MIC Digital Measurement probes and includes wireless Bluetooth communication to send the data to your PC easily and quickly. (See TN-026.)

### User-Friendly Operation



PRO-MIC Keypad

Routine measurements are accomplished using a simple three button control:

1. **START/STOP** taking data
2. **VIEW** data
3. **PLOT** roll profile



During the measurement, the PRO-MIC display shows the live and continuously changing diameter and its location on the roll. While still on the roll, PRO-MIC can reveal the Taper, Crown, Maximum and Minimum. The LCD display is LED backlit for easier viewing in dimly lit shops.

An additional **MENU** button gives the user access to a variety of configuration options, such as Millimeters or Inch units, automatic or manual scaling, etc...

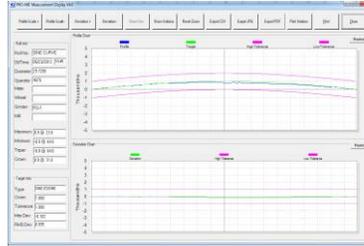
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# PRO-MIC Roll Measurement Systems

## PRO-MIC Quantum Software PC Based Roll Profile Storage and Analysis

- TARGET SHAPES
- TOLERANCE BANDS
- PROFILE COMPARISONS
- NETWORK READY
- EXPORT TO PDF & MICROSOFT EXCEL



Roll Number	Operator	Date	Time	Diameter	Grinder
SHAPE ANALYSIS	4070	11/21/2009	11:59	29.8250	RG-1
NONE	4104	11/23/2009	11:54	29.9450	RG-1
SINE WITH TOL	4070	11/21/2009	15:54	29.7200	RG-1
SINE CURVE	4070	05/23/2012	10:45	29.7200	RG-1

PRO-MIC Quantum software is Microsoft Windows software designed to operate in the roll shop at the grinder. Instead of printing Roll Profile reports directly as with the basic System II, the PRO-MIC data is transferred to the PC for storage and analysis, reports are printed from the PC. A history of 5,000 grindings can be stored.

The System is capable of drawing a wide variety of **target shapes** and **tolerance bands** including Sine/Cosine, CVC, Flat, Taper-Flat-Taper, Taper-Taper-Flat-Taper-Taper, Parabolic, etc... System III also provides **Roll Comparisons** by charting up to three profiles at one time. This technology is useful for comparing ground vs. worn profiles as well as Hot vs. Cold profiles.

Quantum is fully **networkable** to allow PRO-MIC data to be collected from **multiple grinders** and stored in one centrally located database. Supervisors then have access to all of the stored grindings.

Versions are available to suit the needs of both metals and paper related industries. (See TN-007T)

## PRO-MIC Precision Roll Calipers



PRO-MIC also offers a traditional dial indicator equipped version of its roll profiling systems.

These classic Saddle Mics or Roll Calipers use the supplied dial indicator to indicate the roll profile as they travel down the roll body.

The same mechanical precision found in PRO-MIC's electronic systems is used in the Dial Indicator Saddles. (See TN-017)

Standard Size Ranges are:  
 4" to 22" (100/560mm)  
 8" to 32" (200/800mm)  
 8" to 40" (200/1015mm)  
 16" to 48" (400/1200mm)  
 16" to 64" (400/1600mm).

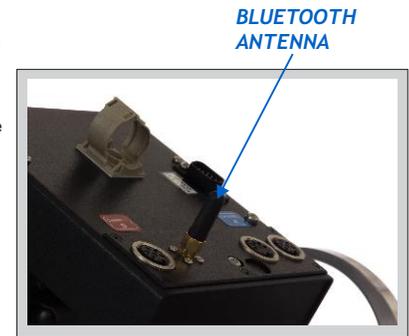
## PRO-MIC Bluetooth Wireless Wireless Communication

PRO-MIC Bluetooth wireless communication is an optional feature for PRO-MIC System II Digital Systems.

This feature enhances the PRO-MIC to provide wireless communication between the PRO-MIC electronics and a PC running our Visual Quantum software package.

This is a tremendous feature for measuring rolls in place in your rolling mill, calender, or processing line.

It is also convenient for Roll Shop use where the roll measurement may occur some distance from the computer station. (See TN-023BT)



## PRO-MIC TIR / Concentricity Roundness Measurement

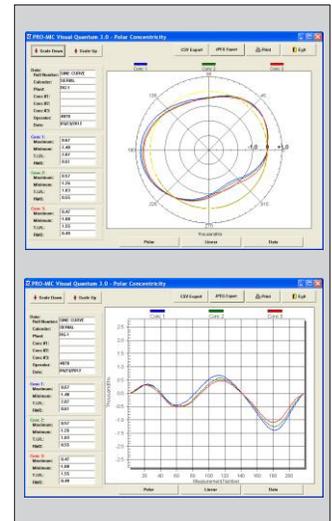
The PRO-MIC Concentricity Measurement Option for System II measures change in radius continuously as a roll rotates in the grinder or lathe.

The data is measured relative to the starting point of rotation and documents concentricity, eccentricity or ovality - any of which could be caused by the roll or by the bearings.

While the System II electronics package is used to make and control measurements, the saddle micrometer itself is not used.

Measurements are made on a timed basis. A proximity sensor is used to indicate each revolution of the roll. A PRO-MIC measurement probe is used to measure the dimensional change at the chosen locations as the roll rotates.

(See TN-031)



## PRO-MIC RUGGED HANDHELD

The PRO-MIC Rugged Handheld is a rugged Windows Tablet PC operating a special version of PRO-MIC Quantum software.

Profiles can be wirelessly downloaded from any Bluetooth equipped PRO-MIC for quick viewing and analysis. The handheld is particularly helpful when measuring rolls in place.

The profiles can be downloaded from the handheld to your PC running PRO-MIC's Quantum Software, or, profiles can be printed directly to a WIFI printer.

