

# PRO-MIC

## Electronic Roll Measurement Systems

### PRO-MIC Roundness Measurement Option

The PRO-MIC Roundness Measurement Option measures change in radius continuously as a roll rotates in the grinder. The setup, data collection and processing are accomplished by a software and hardware modification to either your PRO-MIC TRUE End-to-End or Single Probe roll profiling system.

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

While the PRO-MIC electronics package is used to make and control measurements, the mechanical PRO-MIC saddle micrometer itself is not used with this option.

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

#### Features:

Sampling rates up to 200 Hz (adjustable).

Standard resolution of 0.000020"  
(Optional 0.000005").

Live readout while measuring change in radius at up to 2 locations at a time and up to 6 per measurement cycle.

Ability to measure, store and plot following the cycle: Measured change in radius vs. Straight line and 21 station data for each location.

Polar Plot output available from PC Software.

User control of number of periods per cycle, scaling, sampling frequency and data output.

Inch or metric operation.

Optional transfer to PC.

Optional Polar Plot output via PC.

#### Components:

Software and hardware upgrade for either PRO-MIC TRUE End-to-End or Single Probe electronics.

Magnetic based mounting stands for LVDTs.

Proximity Sensor with mounting stand and magnet.

500 copies of Report form.

Instruction manual.



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### How it works...

In overview, the PRO-MIC measurement probe is positioned against the roll using a specially designed magnetic stand and the roll is rotated.

By activating the Roundness option using the PRO-MIC keypad, you instruct the PRO-MIC to remember each change in radius measurement around the roll. Observing the PRO-MIC's base display in this mode will show variation (TIR) as the roll rotates.

A proximity sensor (PS) is used to tell the PRO-MIC when each revolution of the roll is completed. This allows multiple locations to be measured and compared (by moving the probe from place to place while the PS remains fixed). The PS is also mounted using a magnetic stand.

A Wireless connection for the proximity sensor is available.

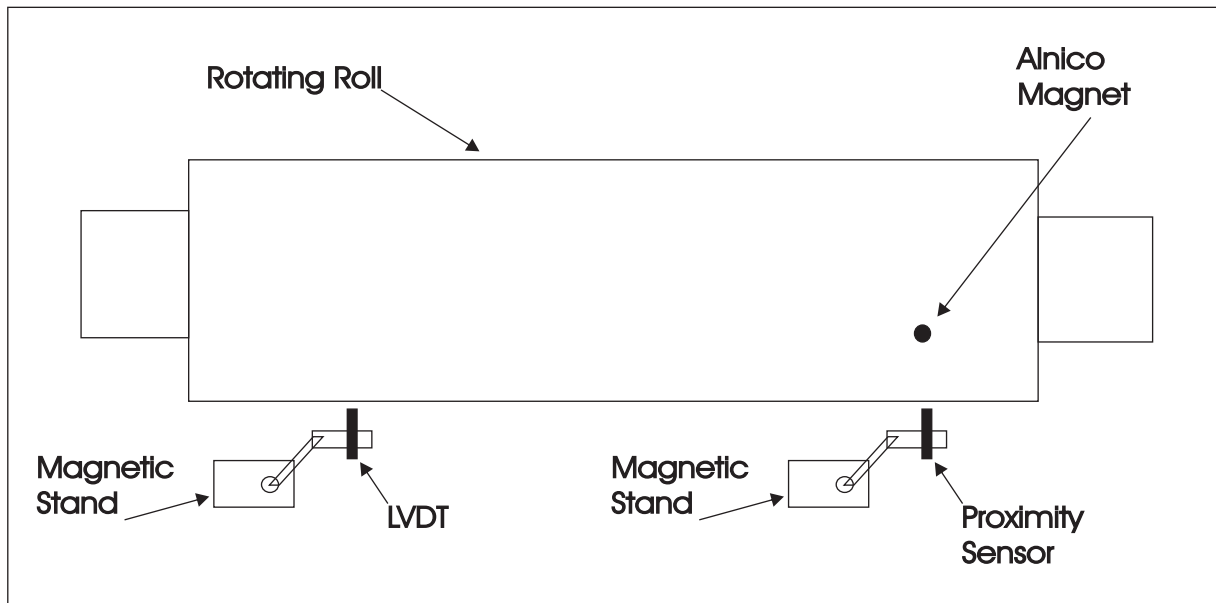
A small Alnico magnet is used to easily trigger the PS.

During the measurement, the PRO-MIC will display TIR values on its display and further plot each measurement (up to 6) vs. a straight line on the Concentricity Report. The PRO-MIC PLUS can record up to three measurements; the TRUE End-to-End can record up to six measurements.

A **Polar Plot** is available by transferring the Roundness data to the PRO-MIC Visual Quantum software package.

Samples of both output formats are available upon request.

### Typical Roundness Setup



# Typical PRO-MIC Roundness Setup

