

The MC4000 Advanced In-Kiln Moisture Measurement System Gives You the Information You Need to Make Decisions That Save Money



Proven for over 50 years in hundreds of mills worldwide, Wagner's moisture measurement systems and moisture analysis software have provided solutions to minimize wet claims and maximize profits. By providing critical moisture quality control data, mills can also rely on these valuable tools to alleviate product degrade due to overdrying. Utilizing state of the art electromagnetic wave technology, the MC4000 includes the most recent innovations for In-Kiln moisture measurement.

The MC4000 Advanced In-Kiln Moisture Measurement System enables the kiln operator to monitor the moisture content (MC) of each charge and develop consistent drying time schedules for improved kiln performance and reduced operating costs. The MC4000 will cut costs due to degrade and overdrying and improve grade recovery to help increase the bottom line.

The automatic kiln shutdown and alarm feature allows kiln operators to maximize time and productivity without having to check for the correct moisture content displayed on the screen. The system can also eliminate hot checks. The MC4000 includes a built-in relay which is capable of shutting down the kiln at a certain moisture content within 1% of target moisture content, or sounding an alarm at the desired moisture level. The MC4000 may be used as a standalone system or can be linked to virtually any computerized kiln controller through our integrated open architecture design.

The Extreme Cost of Overdrying

"Experts have determined that the cost of degrade due to overdrying is about \$3/MBF for each 1% reduction in MC below 17%: this cost in loss increases to about \$7/MBF for each 1% reduction below 12% MC."

Huber, Dean, Madison, WI: U.S. Department of Agriculture, Forest Service, Forest Products Laboratory.

Example: A mill has an annual kiln dry production of 120 million board feet (120 MMBF). The target MC for the lumber is 17%. If this mill overdries its lumber by an average of only 1.5% MC, financial losses due to overdrying degrade would amount to \$3.00 per thousand board feet (1 MBF) times 1.5%, or \$4.50 per thousand board feet. This calculates out to a total of \$540,000 annually in degrade losses due to overdrying.

Why do you need the MC4000 Advanced In-Kiln Moisture Measurement System?

- Saves money by cutting the high costs of degrade due to overdrying
- Minimizes or eliminates inefficient manual hot checks therefore reducing labor costs
- Can integrate with your existing kiln control system
- Helps improve grade to increase your bottom line

MC4000 Advanced In-Kiln Moisture Measurement System Features

- Automatic kiln shutdown and shutdown alarm based on the MC level
- Provides MC measurement for kiln temperature ranges of 70° - 300° F
- Open architecture integrates with virtually any computerized kiln controller
- Large sensing zone to obtain average MC between sensors
- Displays MC of lumber above and below the fiber saturation point
- Provides precise and repeatable MC measurement for consistent results at end point

MC4000 Software Included with Every System

The MC4000 Software provides instant information which enables a kiln operator to prevent overdrying and degrade. View real time on-screen trends of MC measured between the sensors so you can perform changes immediately before degrade occurs. The software allows you to study average drying performance by each individual kiln or kiln charge.

Online diagnostics and software upgrade capability. Every MC4000 In-Kiln System has a built-in modem that allows Wagner to perform remote, online diagnostics, upgrades, and troubleshooting providing you with superior customer support.

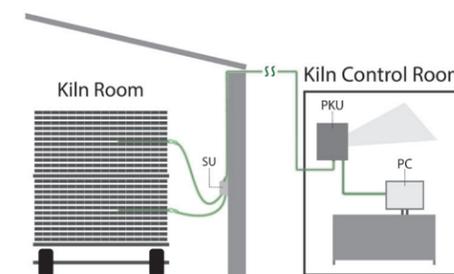
Complete Computer Package Included with Each System

- Average MC readings for each sensing area shown on computer screen
- Ability to view all kilns average MC, status, and current run time on screen
- Printable kiln tracking reports
- Separate sensor readings shown on computer screen to evaluate kiln drying operation over time
- The Charge Screen allows the user to start and stop each kiln charge
- Material lists can be established for different sizes and species of lumber
- Alarm screen shows current and past alarms for each kiln
- Get average MC, status, and run time of kiln selected
- Monitor up to 12 kilns with 1 PC

MC4000 Advanced In-Kiln Moisture Measurement System Components

The MC4000 is manufactured using superior industrial components and Wagner's PROVEN sensing technology. Static electrical charges that adversely affect other technologies have no effect on Wagner's MC4000 In-Kiln System. Wagner has designed its technology for the real-world environment of wood products mills.

The MC4000 Advanced In-Kiln Moisture Measurement System monitors MC in the kiln drying environment from 70° - 300° F. The MC4000 can measure the MC in low temperature drying operations. It displays the MC of lumber above and below the fiber saturation point.



- The PKU (Per Kiln Unit) features a rugged, industrial electronic design. This compact design operates reliably in the most demanding environments.
- 1 PKU can monitor up to 9 sending units.
- Each sending unit measures the average MC of the sensing area located between the sensor probes.
- Durable 16 gauge stainless steel sending units mount to the kiln wall. The electronics can withstand temperatures up to 300° F.
- Up to 12 kilns can be monitored with 1 system.

- Cables from the clamps to the sending units are industrial strength and non-corrosive to withstand the kiln environment.
- Industrial strength clamps easily break away from sensing probes in case of falling wood.
- Heavy duty stainless steel non-corrosive sensing probes.
- 4 ft. and 8 ft. long sensing probes are available to meet your specific needs.
- Easy time efficient system calibration.



Sending Unit



Heavy Duty Clamps Attached to Sensors

To Our Current and Future Customers,

Back in the 1970s and '80s, my father spent many hours working on new designs for in-kiln moisture meters. His first design became our Model 776. I was always amazed, and still am, at how he could create so many working products with the early parts that were available back in the years when the electronics field was pretty much a new invention. The 776 was no exception.

After completing engineering school, I rejoined the company and together my father and I improved the original 776 design. We introduced it as the Model 778 using the latest electronic designs of that time which provided more ease of use as well as better accuracy.

To this day, I often wonder what my father could have designed with the sophisticated electronic parts that we have available to us now. Regardless, I know that he is pleased with Wagner's current MC4000 in-kiln moisture system with its solid circuitry and computer interface that provide the information that our customers rely on today.

Over the many decades, Wagner has developed an outstanding engineering team that I am proud and honored to say provides moisture meter designs still based on some of the innovative concepts developed years ago by my father.

Thanks for putting your faith in Wagner Meters for over 50 years for your moisture measurement needs.

Sincerely,



Ed Wagner
President, Wagner Meters

Technical Details

Power Requirements

- 100-120 VAC or 200-240 VAC
- 7amp, Single Phase 50-60HZ

Operating Environment

- Ambient Temperature Range
Sensors: In-Kiln 70° F to 300° F
Console: 50° F - 110° F

Operator Interface

- Personal Computer
- Monitors up to 12 PKU Consoles

PKU

- Operates up to 9 sensors
- Solid State Shutdown Relay
- NEMA 4-Rated

Sensor Clamps

- Heavy Duty Industrial Strength Clamps
- Stainless Steel Probe Wires

Sensor Probes

- 4' and 8' Lengths
- Heavy Duty Stainless Steel

Sensor Cables

- Non-corrosive stainless steel cables rated to withstand up to 300° F

Sending Units

- 16 Gauge Stainless Steel
- Rated to withstand up to 300° F

Certifications for Compliance

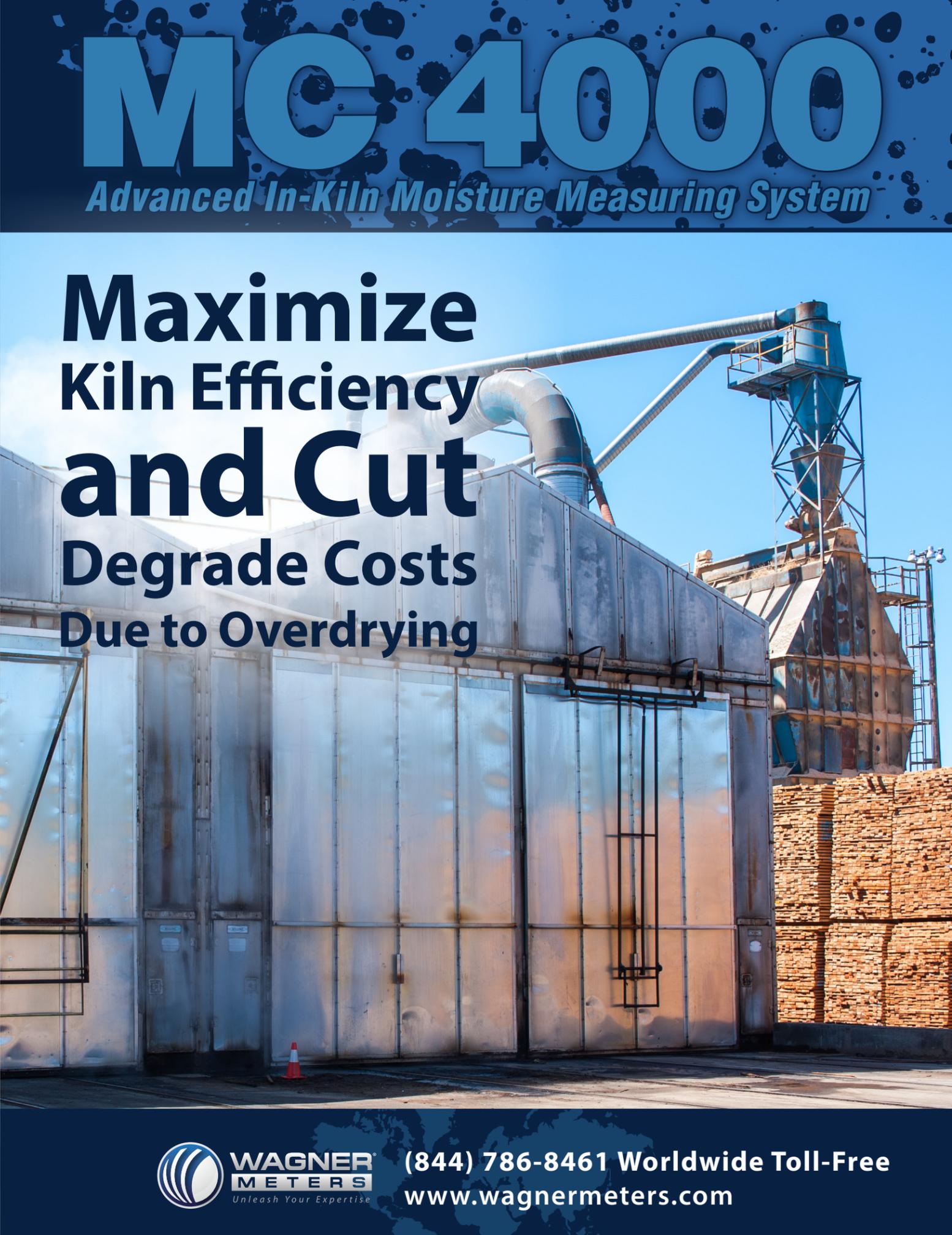
- FCC Certification:
MC4000 Advanced In-Kiln System is certified to comply with FCC Rules and Regulations Part 15 for operation in industrial settings.

Wagner's Superior Customer Service & Technical Support

Wagner Meters is dedicated to providing superior customer service and technical support. The MC4000 Advanced In-Kiln System includes an on-site start up and training visit as a standard feature. Wagner also offers technical support via e-mail, phone, or modem. On-site service after the initial startup is also available for training and service issues. All parts and workmanship are covered by Wagner's standard one-year warranty. Our customer service department has detailed knowledge of each customer and their particular application that is tracked in a shared database for consistent service and technical assistance. Wagner Meters strives to provide customers with the best service and support available.

MC 4000

Advanced In-Kiln Moisture Measuring System



Maximize Kiln Efficiency and Cut Degrade Costs Due to Overdrying



502-MC400-001 REV A

Wagner Meters

For your free return on investment analysis, call:
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