WAGNER
M E T E R S
Unleash Your Expertise

L5300
AND L5200

INDUSTRIAL HAND-HELD WOOD MOISTURE METER

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INTRODUCTION

The L5200 and L5300 industrial hand-held wood moisture meters are the latest advancements in the renowned L-series line. Designed with ease of use and durability in mind, these meters represent the cutting edge of industrial hand-held moisture measurement technology.

L5200 Overview

The L5200 is designed for professionals seeking a reliable, easy-to-use tool for accurate wood moisture measurement without additional connectivity features. This model provides essential functionality for on-site moisture measurement with the trusted accuracy of Wagner's IntelliSense™ technology.

L5300 Overview

The L5300 is compatible with Wagner Meters' L722 Lumber Stack Probe accessory, allowing you to measure hidden moisture deep within stickered lumber stacks. The L5300 also features a computer port for direct data transfer, enabling seamless integration with the new WoodStat Pro software. This added functionality makes the L5300 ideal for professionals needing advanced data and quality control management.

Key Differences Between L5200 and L5300

- **Stack Probe Compatibility**: The L5300 is compatible with the L722 Lumber Stack Probe.

- **WoodStat Pro Moisture Analysis Software:** The L5300 comes with WoodStat Pro software and has a computer port for data transfer. This software enables advanced moisture management and analysis.

Both models utilize Wagner Meters' IntelliSense™ technology, ensuring accurate measurements by reading the moisture *in* the wood, not *on* the wood. With their robust designs and advanced features, the L5200 and L5300 meters are tailored to meet the diverse needs of wood professionals.

Like all Wagner Meters' hand-held moisture meters, moisture readings are virtually unaffected by wood temperature in the normal operating range outside of a kiln environment or frozen wood. Contact Wagner Meters technical support for more information.

METER SPECIFICATIONS

Physical Size:	L 9.37" x W 4.3" x H 3.8" (L 237mm x W 109mm x H 96.5mm)
Weight:	18 oz. (510 g)
Power:	Two 9V Rechargeable Lithium-Ion Batteries
Battery Life:	~28 hours continuous use
Scanning Depth:	1.0" (25.4mm)
Measurement Range:	5% to 32% (dependent on species setting)
Specific Gravity Range:	0.30 - 0.75
Group Storage:	100 groups with 1000 readings per group
Display:	1.6" x 2.2" (40.6mm x 55.9mm)
Default Species:	The meter can hold up to 55 user-editable species
Real-Time Clock:	Records both time and date of all readings
Connectors:	IP67-rated for dust-tight and waterproof operation
Auto Shut Down:	After 1 minute of non-use
Statistical Display:	Min, max, average, and standard deviation on screen
Histogram Option:	Displays data graphically
Comm Port:	USB 2.0 Mini-B Port (IP67-rated) (L5300 Only)
Probe Port:	6P6C R/A connector (IP67-rated) (L5300 Only)
Operating Temperature:	30°F to 120°F (-1.1°C to 48.9°C)

METER LAYOUT

Components

- **Display Screen** – Displays moisture readings, statistics, and settings
- **Directional Pad** – Allows navigation through menu options
- **Menu/Select Button** – Accesses the main menu and confirms selections
- **Power Button** – Turns the meter on and off; stores readings
- **Cancel Button** – Cancels actions and returns to previous menu
- **Sensor Plate** – Used for moisture content readings
- **Battery Door** – Two 9V rechargeable lithium-ion batteries
- **Computer Port** – L5300 only

DISPLAY

POWER
BUTTON

DIRECTIONAL
PAD

MENU/SELECT
BUTTON

CANCEL
BUTTON

BATTERY
DOOR

SENSOR
PLATE

(L5300 Only)

STACK PROBE
PORT

COMPUTER
PORT

UNDERSTANDING YOUR METER DISPLAY

Home Screen

NUMBER OF STORED READINGS
IN ACTIVE GROUP

ACTIVE
GROUP

BATTERY
LIFE

ACTIVE
SPECIES
WITH SG#

Group 1   Readings 003 [====] 98%

Douglas Fir (0.48)

CURRENT
MOISTURE
CONTENT

12.8 %

MAXIMUM
READING

MINIMUM
READING

MIN: 11.6   MAX: 12.8

STD: 0.6   AVG: 12.3

STANDARD
DEVIATION

AVERAGE OF
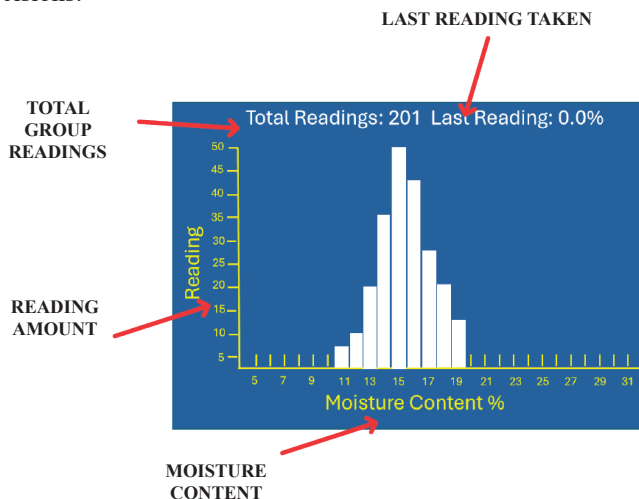READINGS
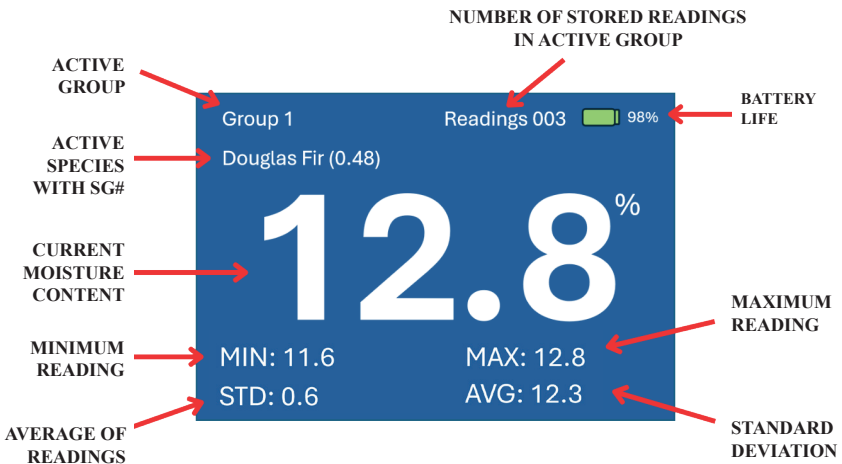
HISTOGRAM DISPLAY

The histogram screen displays the distribution of all the moisture readings in a Group. This feature helps users quickly identify moisture variations in a pack or unit, in a run, or in a board. This makes it easier to spot inconsistencies, assess overall wood quality, and make informed decisions.

LAST READING TAKEN

TOTAL GROUP READINGS

Total Readings: 201 Last Reading: 0.0%

Reading

READING AMOUNT

Moisture Content %

MOISTURE CONTENT

To switch between the reading screen and histogram screen, press **LEFT** or **RIGHT** on the **Directional Pad**.

Directional Pad

Readings taken in this mode will update on the histogram.

Powering On the Meter

1. Insert two **fully charged** 9V rechargeable lithium-ion batteries into the battery compartment.
2. Press and hold the **Power Button** for one second.
3. The display will show the model, software version, and revision numbers.
4. The display will show the **Home Screen**, indicating the meter is ready for use.

Selecting a Species

1. Press the **Menu/Select Button** to access the main menu.
2. Use the **Directional Pad** to navigate to the **"SPECIES"** menu option.
3. Press the **Menu/Select Button** to confirm.
4. Scroll through the species list using the **Directional Pad** and select the desired species.
5. Press the **Menu/Select Button** to save your selection.

If you need to scroll through the species list quickly, continuously press the **UP** or **DOWN** button on the **Directional Pad** to scroll through the pages.

Taking and Storing Readings

1. Ensure the sensor plate is positioned flat against a smooth, clean wood surface, *aligning it **with** the grain* for accurate readings.
2. Apply slight downward pressure to ensure proper contact.
3. The moisture reading will appear on the display.
4. Press the **Power Button** to store the reading in the active Group.

GROUPS

A Group is a collection of readings on a single species. Each Group can only contain one species. You can manage Groups through the "GROUPS" menu. The L5200 and L5300 meters can store up to 1,000 readings per Group, with 100 Groups available.

GROUPS	**HOME**	Group 1 Readings 003 98% Douglas Fir (0.48)
SPECIES	**CALIBRATION**	**12.8** %
SETTINGS		MIN: 11.6 MAX: 12.8 STD: 0.6 AVG: 12.3

VIEWING STORED READINGS AND STATISTICS

1. Press the **Menu/Select Button** to access the main menu.
2. Navigate to the **"GROUPS"** menu option using the **Directional Pad** and confirm with the **Menu/Select Button.**
3. Use the **LEFT** and **RIGHT** sides of the **Directional Pad** to scroll through Groups and view statistical summaries such as:
   - **Minimum Value (MIN)**
   - **Maximum Value (MAX)**
   - **Average (AVG)**
   - **Standard Deviation (STD**)

DELETING GROUP DATA

Delete an individual reading in a Group:
1. Jog left or right to select the Group with the reading that will be deleted.
2. Select the **"Details"** option.
3. Jog to the reading that will be deleted.
4. Press the **Power Button** to delete.
5. Press the **Power Button** again to confirm deletion.

Delete all data in an individual Group:
1. Jog left or right to select the Group data to be deleted.
2. Press the **Power Button** to delete this Group's data.
3. Press the **Power Button** again to confirm deletion.

Delete all data in all Groups:
1. Jog down to **"DELETE ALL"** data in all Groups.
2. Press the **Power Button** to delete all the data in all the Groups.
3. Press the **Power Button** again to confirm deletion.

CUSTOMIZE YOUR SPECIES LIST

Your meter comes preloaded with 46 wood species. To customize your species list, follow the instructions below.

Add a New Species:

1. Press the **Menu/Select Button** to access the main menu.
2. Navigate to the **"SPECIES"** menu option and confirm with the **Menu/Select Button.**
3. To add a new species to your list, click **RIGHT** on the **Directional Pad.**
4. Use the **Directional Pad** and the **Menu/Select Button** to enter the species name.
5. To select the new species' Specific Gravity, use the **Directional Pad** to navigate to the red **SG** option on the keyboard, then click the **Menu/Select Button.**
6. Adjust the Specific Gravity using the **UP** and **DOWN** options on the **Directional Pad**. Once set, press the **Back** button.
7. Press the **Menu/Select Button** to save your new species.

Edit an Existing Species:

1. Navigate to the "**SPECIES**" menu option and use **UP** and **DOWN** on the **Directional Pad** to locate the species you would like to edit.
2. Press the **Power Button** to edit your selection.
3. Use the **Directional Pad** and the **Menu/Select Button** to edit the species name.
4. To edit the species' Specific Gravity, use the **Directional Pad** to navigate to the red **SG** option on the keyboard, then click **Menu/Select Button.**
5. Adjust the Specific Gravity using the **UP** and **DOWN** on the **Directional Pad**. Once set, press the **Back** button.
6. Press the **Menu/Select Button** to save your edits to this species.

ADJUSTING METER SETTINGS

1. Press the **Menu/Select Button** to access the main menu.
2. Navigate to the "**SETTINGS**" menu option and confirm with the **Menu/Select Button.**
3. Adjust options such as:
   • **Display Brightness:** Use the **Directional Pad** to adjust brightness levels.
   • **Alarm Thresholds:** Set alerts for specific moisture content levels.
   • **Locale:** Change language, date, and time formats.

SETTINGS

<SCREEN BRIGHTNESS 05>

ALARM THRESHOLDS
LOCALE

≡ SELECT   ✕ BACK

GROUPS	HOME
SPECIES	CALIBRATION
SETTINGS	

USING THE L722 LUMBER STACK PROBE ACCESSORY (L5300 ONLY)

4. Attach the legacy adapter to the **Stack Probe Port.**
5. Connect the **L722 Stack Probe** to the adapter.
6. Use the Velcro strap provided to secure the coil cord to the L5300 handle.
7. For proper use of the **L722 Stack Probe**, please refer to the **L722** manual.

Scan the QR code for instant access.

https://www.wagnermeters.com/pdf/
wagner-meters-l722-manual.pdf

LEGACY ADAPTER
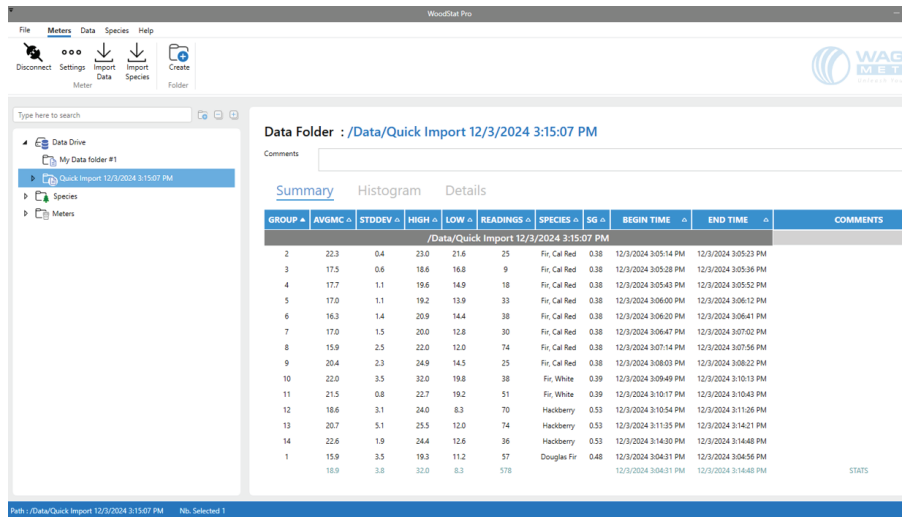

STACK PROBE PORT

CABLE STRAIN RELIEF

THE L5300 PAIRED WITH THE L722 STACK PROBE DIVES DEEP INTO LUMBER STACKS TO UNCOVER HIDDEN MOISTURE

WOODSTAT PRO (L5300 ONLY)

WoodStat Pro is a Windows-based software solution designed to help professionals in the wood industry efficiently organize, analyze, and report moisture data collected from Wagner Meters' L5300 and L622 moisture meters. By providing powerful data management tools, WoodStat Pro ensures accurate moisture tracking, helping users maintain quality control, optimize drying processes, and prevent costly moisture-related issues.

Why Use WoodStat Pro?

- **Streamline Data Management** – Easily upload, organize, and review moisture readings.
- **Advanced Reporting** – Generate detailed reports with histograms and statistical insights.
- **Customization Options** – Modify and create custom wood species profiles.
- **Enhanced Quality Control** – Ensure compliance with moisture standards by monitoring and analyzing trends over time.

To get started, please refer to the **QuickStart Guide**. Scan the QR code below or click the link to access step-by-step instructions for using WoodStat Pro efficiently.

https://wmeters.com/WSP-QuickStart

CALIBRATION

Calibration is factory set and verified using a Wagner Meters On-Demand Calibrator Block (ODC). Complete the following steps to ensure accuracy:

1. To verify calibration of your L5300, set the species to Douglas fir, place the meter on the ODC, and compare to the Reference number written on the ODC label. If the numbers are more than +/- 1% MC off, recalibrate the meter.
2. If calibration is deemed necessary, enter calibration mode via the **"SETTINGS"** menu.
3. Follow on-screen prompts to verify or recalibrate the meter. Instructions can also be found on the back of your ODC.

NIST traceable On-Demand Calibrator blocks are also available to customers who wish to ensure their moisture meter's accuracy is verified against a recognized national standard for precision and compliance.

ON-DEMAND CALIBRATOR BLOCK

TECHNICAL NOTES:

Clock/Calendar – The L5300 meter contains a real-time clock and calendar. The clock/calendar is set through the WoodStat Pro software or through Settings / Locale.

Company Name – Company name (logo is optional) is configured in WoodStat Pro and will automatically appear on all reports generated within the program (L5300 Only).

Non-Volatile Memory – The L5200 and L5300 meters are equipped with non-volatile memory, ensuring that your stored readings remain intact even when the batteries are removed.

Auto Power-Off – To conserve battery power, the meter will automatically shut off after one minute of inactivity.

MAINTENANCE TIPS

- Store the meter in a dry, dust-free environment.
- Recharge batteries as needed and always have spares ready.
- A Phillips head screwdriver is needed to access the battery compartment.
- Clean the sensor plate regularly with a soft, dry cloth.

WARRANTY

Wagner Meters warrants this product against defects in material and workmanship for one (1) year from the date of purchase, subject to the following terms and conditions: Wagner Meters' liability under this warranty shall be limited, at Wagner Meters' option, to repair or replacement of this product or any part thereof, which is demonstrated to be defective. To exercise this warranty, customer must telephone, fax or email Wagner Meters' Customer Service Department for factory instructions for shipment. This limited warranty does not apply if accident, negligent handling, misuse, alteration, damage during shipment, or improper service have damaged the product. Wagner Meters shall, in no event, be liable for incidental or consequential damages for the breach of any express or implied warranty with respect to this product or its calibration. With proper care and maintenance, as recommended in the manual, the meter should stay in calibration; however, because Wagner Meters has no control over the manner in which the unit will be used, it makes no warranty that the meter will stay in calibration for any specific period of time. Wagner Meters recommends purchasing a calibration verification block, or on a yearly maintenance schedule, return the unit to the factory for diagnostic checkup and re-calibration on the anniversary date of purchase.

This warranty is in lieu of all other warranties, whether oral or written, express or implied. Any implied warranties, including implied warranties of merchantability and fitness for a particular purpose, are excluded.

Agents and employees of Wagner Meters are not authorized to make modifications to this warranty or additional warranties binding on Wagner Meters. Accordingly, additional statements, whether oral or written, except written statements from an officer of Wagner Meters do not constitute warranties and should not be relied upon by the customer. This warranty is personal to the customer purchasing the product from Wagner Meters and is not transferable.

REGISTRATION

Register the new meter today to activate your 1-year warranty. Scan the QR code or use the link below to get started.

Register the meter at GenuineWagner.com

FAQ'S

How can I take accurate moisture readings without using pins? Why doesn't my Wagner meter match my old pin-type meter?
Pin-type meters measure resistance, which means they send an electric charge through the wood and measure how easily it flows. This method can be affected by factors like chemical content, temperature, and surface moisture. Pin-type meters also require temperature corrections for accurate readings.

Wagner Meters' pinless moisture meters use electromagnetic wave technology, which scans the wood and provides precise moisture content readings without damage. Because pin meters measure a very small area and can be skewed by small wet fibers or dry patches, their readings may not always align with Wagner Meters' broad scanning method.

What is the main difference between pin and pinless meters?
- **Pin meters:** Read only at the depth of the pins, usually a small line between the pin tips.
- **L5200 and L5300 Pinless Meters:** Use a three-dimensional electromagnetic field that scans from the surface down to 1 inch deep over the entire sensor area (about 2 ½ inches x 2 ½ inches on the L5300).

Can I measure plywood, particle board, or OSB?
Due to varying densities and adhesives, readings may not be as reliable. If you work with these materials frequently, custom calibration guidelines can be developed. Contact Wagner Meters for recommendations.

What is the narrowest piece of lumber I can measure accurately with my Wagner meter?
The L5200 and L5300 can measure boards as narrow as 2 ½ inches wide.

What thickness of boards can I measure?
The meter accurately measures boards as thin as ½ inch and up.

Can I take readings on 4x4 or thicker lumber?
Not with just one reading, but you can quickly scan all sides of a 4x4 board using an L5200 or L5300 moisture meter.

Note: Most wood grading agencies consider 1-inch depth scanning sufficient for thicker beams and posts.

Does surface moisture affect readings?
Surface moisture may cause a slight increase in readings (typically 3-4% higher than normal). To ensure accuracy, always wipe off excess water before taking a measurement.

How does relative humidity (RH) impact readings?
As long as condensation does not form on the meter's bottom surface, RH will not affect readings.

How often should I check my meter's calibration?
This depends on usage frequency and accuracy requirements. If consistent accuracy is critical, use the On-Demand Calibrator block regularly to confirm performance.

Can I measure moisture through laminated materials?
- **Note:** Veneers must be stacked to a minimum height of 1 inch to provide sufficient mass for accurate readings.
- **Plastic or Formica laminates:** These have their own density, which affects readings. You can determine the variance by measuring the core alone and then with the laminate applied.

Does the meter work the same on rough lumber as it does on smooth lumber?
Rough lumber may trap air between the meter and the wood surface, slightly reducing accuracy. Applying firm, even pressure will minimize any impact. If needed, add 1-2% to compensate.

Does the orientation of a Wagner hand-held moisture meter on the wood affect accuracy?
Yes, to ensure accurate readings, always position the meter with the grain of the wood.

Does temperature affect readings?
Unlike pin-type meters, which require temperature corrections, Wagner meters' provide accurate readings at any temperature. Even frozen wood can be measured reliably if moisture content is below 15%. For readings above 15% in frozen wood, minor corrections may be necessary.

Are Wagner moisture meters safe to use?
Yes. Wagners' meters comply with **FCC and CE safety regulations** and pose no health risks.

Moisture Content Guidelines: What is the ideal moisture content for wood? This depends on wood type and application:

- **Construction lumber (studs, framing): 15-19%**
- **Furniture making: 6-8%**
- **Wood for gluing:** Must be **neither too dry nor too wet**—check manufacturer guidelines.

For industry-specific recommendations, consult a University Wood Product Representative or the Forest Products Research Laboratory in Madison, WI (608-231-9200).

How can I confirm that my moisture meter is providing accurate readings?
To ensure your meter's accuracy, use the On-Demand Calibrator (ODC). This allows you to quickly verify that your meter is reading within its specified accuracy range. If the meter's readings do not match the reference value on the On-Demand Calibrator (ODC), it may need recalibration.

For professionals who need to validate and document their moisture meter's accuracy against a recognized national standard, Wagner Meters offers a NIST traceable On-Demand Calibrator (ODC) complete with a certification of accurate calibration.

FACTORY SPECIES LIST

The following chart lists the 46 factory-loaded wood species available in your meter, along with their corresponding specific gravity (SG) values.

Species	SG
Alder, Red	0.41
Ash, White	0.6
Basswood	0.42
Beech, American	0.64
Birch, Yellow	0.62
Cedar, Alaskan	0.44
Cedar, East Red	0.47
Cedar, West Red	0.32
Cherry, Black	0.5
Cypress, Bald	0.42
Douglas Fir	0.48

Fir, Balsam	0.35
Fir, Cal Red	0.38
Fir, Subalpine	0.32
Fir, White	0.39
Hackberry	0.53
Hemlock, East	0.4
Hemlock, West	0.45
Hickory, Mocker	0.72
Hickory, Nutmeg	0.6
Hickory, Pecan	0.62
Larch, Western	0.52
Maple, Bigleaf	0.48
Maple, Sugar	0.63
Oak, North Red	0.63
Oak, South Red	0.59
Oak, White	0.68
Pine, Eastern White	0.35
Pine, Jack	0.43
Pine, Loblolly	0.51
Pine, Lodgepole	0.41
Pine, Longleaf	0.59
Pine, Ponderosa	0.4
Pine, Radiata	0.45
Pine, Scots	0.55
Pine, Shortleaf	0.51
Pine, Slash	0.59
Pine, Southern Yellow (SYP)	0.56
Pine, Sugar	0.36
Pine, Virginia	0.48
Poplar, Yellow	0.42
Redwood, Old	0.4
Redwood, Young	0.35
Spruce, Englman	0.35
Spruce, Sitka	0.4
Walnut, Black	0.55

TECHNICAL SUPPORT

Should you require support outside of what this manual provides, please contact a Wagner Meters' Technical Service Representative during normal business hours:

Phone: (844) 755-3460
Fax: (541) 582-4138
Email: support@wagnermeters.com

Mail:
Technical Services Department
Wagner Meters
326 Pine Grove Road
Rogue River, OR 97537

All products returned for repair must be accompanied by a Repair Order Form found on our website at: **WagnerRepairs.com**.

Repairs should be returned to the following address:

Wagner Meters
326 Pine Grove Road
Rogue River, Oregon 97537
Phone (844) 755-3460
Fax (541) 582-4138

REPAIR SERVICE

PLEASE NOTE: You must remove the two 9V rechargeable lithium-ion batteries from your meter before shipping your meter back.

Standard repairs: Customer must pay the expense of shipping the product to and from Wagner Meters.

Warranty repairs: Customer must pay the expense of shipping the product to Wagner Meters. Wagner Meters will pay the cost of return shipment by surface carrier within the continental United States. Customers must pay all extra costs of expedited shipping or shipment to and from locations outside of the continental United States.
Email: support@wagnermeters.com
Web: WagnerMeters.com

International Repair Service
Call or email for nearest Repair Depot:
Phone (Worldwide Toll-Free): (844) 755-3460

Notes

Notes

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326 Pine Grove Road
Rogue River, OR 97537
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info@wagnermeters.com

WagnerMeters.com
(800) 505-1409

For additional information, visit: WagnerMeters.com