



Manuals.plus /

› **Fristaden Lab** /

› Fristaden Lab Halogen Moisture Analyzer User Manual

Fristaden Lab ME Series Touch Screen XY101ME

Fristaden Lab Halogen Moisture Analyzer User Manual

Model: ME Series Touch Screen XY101ME

INTRODUCTION

The Fristaden Lab Halogen Moisture Analyzer is a professional instrument designed for precise moisture content determination. Utilizing a halogen lamp heater and a high-precision lab scale (110 g x 0.001 g), it offers 0.01% moisture content accuracy. This device features an easy-to-use LED touchscreen with automatic and manual heating modes, allowing customization of heating time and speed based on sample type. It also includes an RS-232 connection for data transfer and memory for storing test parameters.



Figure 1: Fristaden Lab Halogen Moisture Analyzer with its lid open, revealing the halogen heating element and the sample pan holder.

SAFETY INFORMATION

- Always operate the moisture analyzer on a stable, level surface to ensure accurate readings.
- Ensure proper ventilation around the unit, especially during operation, as the halogen lamp generates heat.
- Do not touch the heating element or sample pan immediately after operation, as they will be hot. Allow sufficient time for cooling.
- Use only the provided power adapter and ensure the power supply matches the specified voltage (110V).
- Avoid spilling liquids or corrosive substances onto the device, especially near the electrical components.
- Keep the device away from strong electromagnetic fields, vibrations, and direct sunlight.
- Do not attempt to disassemble or repair the unit yourself. Refer to qualified service personnel.
- Keep out of reach of children.

WHAT'S IN THE BOX

Upon opening the package, verify that all components are present and undamaged:

- Fristaden Lab Halogen Moisture Analyzer Unit
- Calibration Weight
- Pan Holder
- Sample Remover
- 10 x Disposable Sample Pans



Figure 2: Contents of the Fristaden Lab Halogen Moisture Analyzer kit.

SETUP

1. **Unpacking:** Carefully remove the moisture analyzer and all accessories from the packaging. Retain the original packaging for future transport or storage.

2. **Placement:** Place the unit on a stable, level, and vibration-free surface, away from direct sunlight, drafts, and heat sources. Ensure adequate space for ventilation.
3. **Power Connection:** Connect the power adapter to the analyzer's power input port (located at the rear) and then plug it into a grounded 110V AC power outlet.
4. **Initial Power On:** Press the power button. The LED touchscreen will illuminate, and the device will perform a self-test.
5. **Install Pan Holder:** Place the pan holder onto the weighing pan. Ensure it is seated correctly and stable.
6. **Calibration (Recommended):** Before first use and periodically thereafter, perform a calibration using the provided calibration weight. Refer to the "Operating Instructions" section for detailed calibration steps.

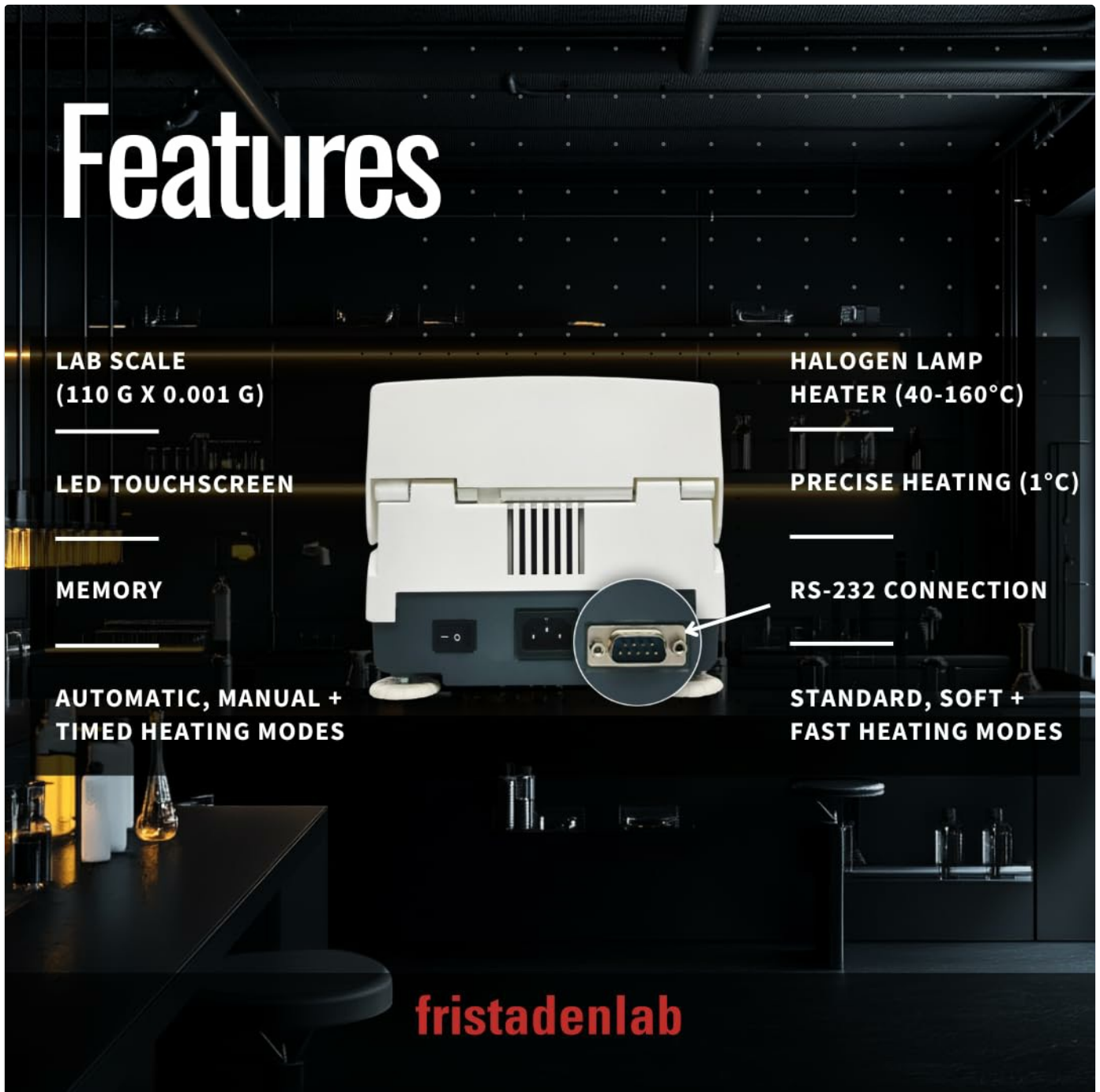


Figure 3: Rear view of the analyzer, highlighting connection ports.

OPERATING INSTRUCTIONS

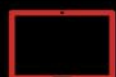
Basic Operation:

1. **Power On:** Ensure the device is plugged in and press the power button.
2. **Place Sample Pan:** Open the lid and carefully place a clean, dry disposable sample pan onto the pan holder.
3. **Tare:** Close the lid and press the "Tare" button on the touchscreen to zero the display.
4. **Add Sample:** Open the lid and carefully add your sample to the center of the sample pan. Ensure the sample is evenly distributed. Close the lid.
5. **Select Heating Mode:**
 - **Automatic Mode:** The device automatically determines the drying time based on the sample's moisture loss rate.
 - **Manual Mode:** Set a specific heating time and temperature.
 - **Timed Mode:** Set a specific heating duration.

Adjust temperature (40-160°C) and heating speed (Standard, Soft, Fast) as needed via the touchscreen.

6. **Start Test:** Press the "START" button on the touchscreen. The analyzer will begin the drying process, continuously displaying the current weight and moisture content.
7. **End of Test:** The test will automatically stop when the selected criteria are met (e.g., stable weight in automatic mode, or time elapsed in manual/timed mode). The final moisture content will be displayed.
8. **Remove Sample:** Open the lid and use the sample remover to carefully remove the hot sample pan.

Precise Control



**EASY-TO-USE
TOUCHSCREEN**



**AUTOMATIC +
MANUAL
HEATING**



**RS-232
(COMPUTER)
CONNECTION**



fristadenlab

Figure 4: Touchscreen interface for precise control of heating modes and settings.

Calibration:

Regular calibration ensures the accuracy of your moisture analyzer. Use the provided calibration weight.

1. Access the calibration menu via the touchscreen (usually labeled "CAL" or "Calibration").
2. Follow the on-screen prompts. The device will likely ask you to tare the pan holder first.
3. Place the calibration weight onto the center of the pan holder when prompted.
4. Wait for the device to stabilize and complete the calibration process. Remove the weight when instructed.
5. The display will confirm successful calibration.

MAINTENANCE

- **Cleaning:**

- Always disconnect the power before cleaning.

- Wipe the exterior of the analyzer with a soft, damp cloth. Do not use abrasive cleaners or solvents.
 - Clean the sample pan holder and heating chamber regularly to prevent residue buildup. Ensure the heating element is cool before cleaning.
 - Do not allow liquids to enter the interior of the device.
- **Storage:** When not in use for extended periods, store the analyzer in a clean, dry, and dust-free environment. Use the original packaging if available.
 - **Lamp Replacement:** The halogen lamp has a finite lifespan. If the lamp fails, contact Fristaden Lab support for replacement instructions or service. Do not attempt to replace it yourself unless specifically instructed.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	No power supply; loose connection; faulty power adapter.	Check power cable connection; ensure outlet is functional; try a different outlet. If problem persists, contact support.
Inaccurate readings.	Not level; vibrations; drafts; dirty pan/holder; needs calibration.	Ensure device is level and stable; avoid drafts; clean pan and holder; perform calibration.
Heating element not working.	Halogen lamp failure; internal fault.	Contact Fristaden Lab support for assistance. Do not attempt to replace the lamp yourself.
Touchscreen unresponsive.	Temporary software glitch; physical damage.	Restart the device. If the issue persists, contact support.
RS-232 connection issues.	Incorrect cable; driver issues; software settings.	Ensure correct RS-232 cable is used; check computer's serial port settings and drivers; consult software manual.

SPECIFICATIONS

Feature	Detail
Model	ME Series Touch Screen XY101ME
Moisture Content Accuracy	0.01%
Display Type	Large Color LED Touchscreen
Heating Method	Halogen Lamp
Temperature Range	40-160°C
Scale Capacity	110 g
Scale Readability	0.001 g
Linearity Error	±0.003 g
Dimensions (L x W x H)	6.5 x 12 x 10 inches (approx.)
Net Weight	8.8 lbs (approx.)
Power Supply	110V
Connectivity	RS-232

Specifications

Model: XY-101ME

Moisture Content Accuracy: 0.01%

Display: Large Color LED Display

Heating Method: Halogen Lamp

Temperature: 40-160°C

Scale Capacity: 110 g

Scale Readability: 0.001 g

Linearity Error: ±0.003 g

Dimensions: 6.5 x 12 x 10 in

Net Weight: 8.8 lbs

Power: 110V

Warranty: 1 Year

fristadenlab

Figure 5: Detailed technical specifications of the moisture analyzer.

WARRANTY AND SUPPORT

Fristaden Lab, an American company since 2013, stands behind the quality of its products.

- **Warranty:** This Fristaden Lab Halogen Moisture Analyzer comes with a **1-year warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage caused by misuse, accident, unauthorized modification, or improper operation.
- **Customer Support:** For technical assistance, warranty claims, or any questions regarding your Fristaden Lab Halogen Moisture Analyzer, please visit the official Fristaden Lab website or contact their customer service directly. Refer to the product packaging or the Fristaden Lab website for the most current contact information.
- **Online Resources:** Additional resources, including FAQs and updated manuals, may be available on the Fristaden Lab website.

