

TOUCH SCREEN HALOGEN MOISTURE ANALYZER



Touch Screen Halogen Moisture Analyzer - ToronMA™ T Series

ToronMA™ T Series touch screen halogen moisture analyzer uses a 5-inch color touchscreen and a high-brightness halogen lamp across a 40–199°C range to determine moisture content at 0.01% readability. A single-body aluminum shell houses the stainless steel heating chamber and thermal sensor in a compact, portable enclosure. The T100 model covers 110g capacity with a ø90mm sample pan and an integrated real-time drying curve display. An optional grinder, printer, and aluminum carry box extend utility for field testing and mobile deployment.

The 5-inch color touchscreen gives access to thirteen functional settings covering heating mode, temperature calibration, stop mode, data storage, and time/date configuration. Moisture and dry residue display as percentages throughout the drying cycle, with results stored across 20 addresses and 20 historical records for RS232 output. A temperature intelligent control center manages the heating chamber, and a heating status observation window allows visual monitoring without interrupting the test. External calibration maintains weighing traceability using a separately supplied reference weight.

The stainless steel chamber sits on a mirror windproof tray with a silicone cushion pad, isolating the weighing assembly from bench vibrations during drying. An aluminum sample pan with an insulated carry basket allows safe handling of the hot pan after each test. A control switch, side handle, and adjustable feet let the operator position and relocate the T Series across different workbenches without tools. The 365 × 235 × 185 mm form factor and 7 kg weight support single-operator transport between test stations.

APPLICATIONS

Touch Screen Halogen Moisture Analyzer - ToronMA™ T Series Applications

The ToronMA™ T Series suits quality-control, laboratory, and production environments where a compact, portable touchscreen halogen moisture analyzer is required.

- **Pharmaceutical and Traditional Medicine:** moisture content determination of tablets, capsules, and herbal products to verify specifications and support pharmacopoeial quality documentation
- **Food and Agricultural Products:** moisture analysis of soybeans, corn, rice, white sugar, and other food commodities where moisture content affects storage, shelf life, and commodity grading
- **Plastics and Polymer Processing:** pre-process moisture testing of polymer pellets before extrusion or injection molding, where target moisture levels are often at or below 0.25%
- **Paper and Packaging Materials:** moisture verification in paper, board, and packaging where water content affects dimensional stability, print quality, and structural performance
- **Chemical Raw Materials and Excipients:** incoming material moisture verification and process monitoring for chemical intermediates and pharmaceutical excipients
- **Field and Mobile Testing:** with the optional aluminum carry box and grinder, the T Series supports moisture measurement at grain storage facilities, warehouses, and agricultural processing sites
- **Cosmetics and Personal Care:** raw material moisture content verification where water activity affects product texture, preservation efficacy, and formulation stability
- **Educational and General Laboratory Use:** thirteen functional settings and a straightforward touchscreen interface make the T Series well-suited to training environments and general laboratory moisture testing



FEATURES

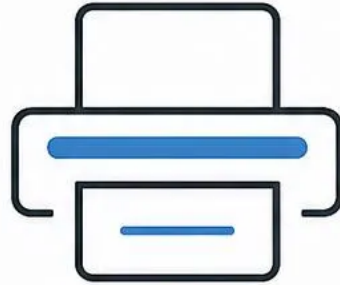
Touch Screen Halogen Moisture Analyzer - ToronMA™ T Series Key Features

The ToronMA™ T Series delivers halogen moisture analysis through a 5-inch color touchscreen with stainless steel chamber construction and a stacked vibration-isolation base.

5
Inch



5 Inch Touch Screen



Print Setting

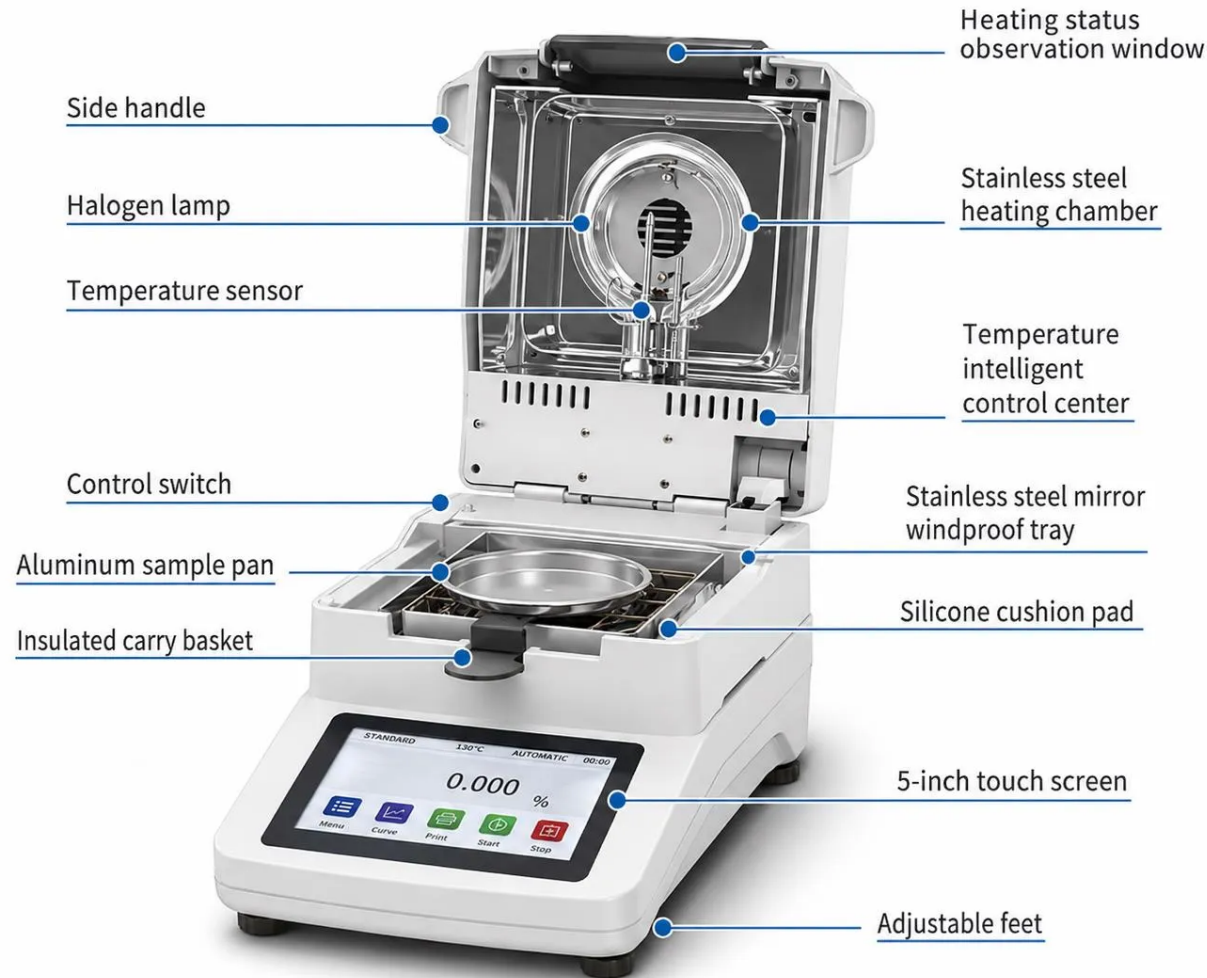


RS232



Ext. Cal.

- **5-Inch Color Touchscreen:** icon-based interface provides single-tap access to thirteen functional settings, heating mode selection, real-time drying curve, and historical data
 - **High-Brightness Halogen Lamp (400W):** top-down radiant heating reaches the target drying temperature across the 40–199°C range faster than convective oven methods for the same sample size
 - **Temperature Intelligent Control Center:** dedicated temperature management module monitors the heating chamber and adjusts lamp output throughout the drying cycle to maintain the set temperature
 - **Heating Status Observation Window:** side window allows visual inspection of the sample during drying without opening the chamber or interrupting the measurement cycle
 - **Stainless Steel Heating Chamber:** durable chamber withstands repeated thermal cycling and resists chemical contamination from volatile samples during high-temperature drying
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- **Stainless Steel Mirror Windproof Tray:** polished mirror surface beneath the chamber blocks upward air currents from the bench, reducing pressure-differential interference during the weighing phase
 - **Silicone Cushion Pad:** shock-absorbing pad between the windproof tray and the bench surface isolates the weighing cell from external bench vibrations throughout the drying cycle
 - **Aluminum Sample Pan (φ90mm):** lightweight pan accommodates a wide range of sample container sizes within the 110g capacity range
 - **Insulated Carry Basket:** basket handle allows safe removal and loading of the hot sample pan without direct skin contact with the pan surface after each test
 - **Real-Time Dynamic Drying Curve:** moisture content plotted against elapsed time on the touchscreen throughout the cycle, letting the operator track drying rate and confirm equilibrium
 - **Moisture and Dry Residue as Percentage:** displays moisture percentage and residual dry mass percentage simultaneously for complete sample characterization per test
 - **13 Functional Settings:** heating mode, stop mode, environment and temperature calibration, instrument calibration, data storage, date/time, baud rate, and touchscreen calibration



- **20-Set Data Storage:** stores 20 test programs and 20 historical records for standard laboratory and production QC use
- **RS232 Interface:** connects to printers for GLP-format result output and to PCs for data logging
- **External Calibration:** all models calibrate with a user-supplied reference weight at operator-defined intervals to maintain weighing traceability
- **Single-Body Aluminum Shell:** compact, durable aluminum housing integrates all components in a 365 × 235 × 185 mm, 7 kg enclosure

- **Side Handle:** built-in handle enables single-operator carrying between workbenches and test stations
- **Adjustable Feet:** four adjustable feet support level positioning on varied bench surfaces for accurate weighing
- **CN/EN Bilingual Interface:** switchable Chinese/English language setting for multi-region laboratory and production environments
- **Optional Grinder:** sample preparation grinder for reducing particle size of grain, seed, and solid samples before moisture testing, improving sample homogeneity and result repeatability
- **Optional Printer:** external RS232 printer for hard-copy GLP-format moisture results and historical record output
- **Optional Aluminum Carry Box:** protective transport case for the complete instrument, supporting field deployment and mobile testing at external sites

THEORY & METHOD

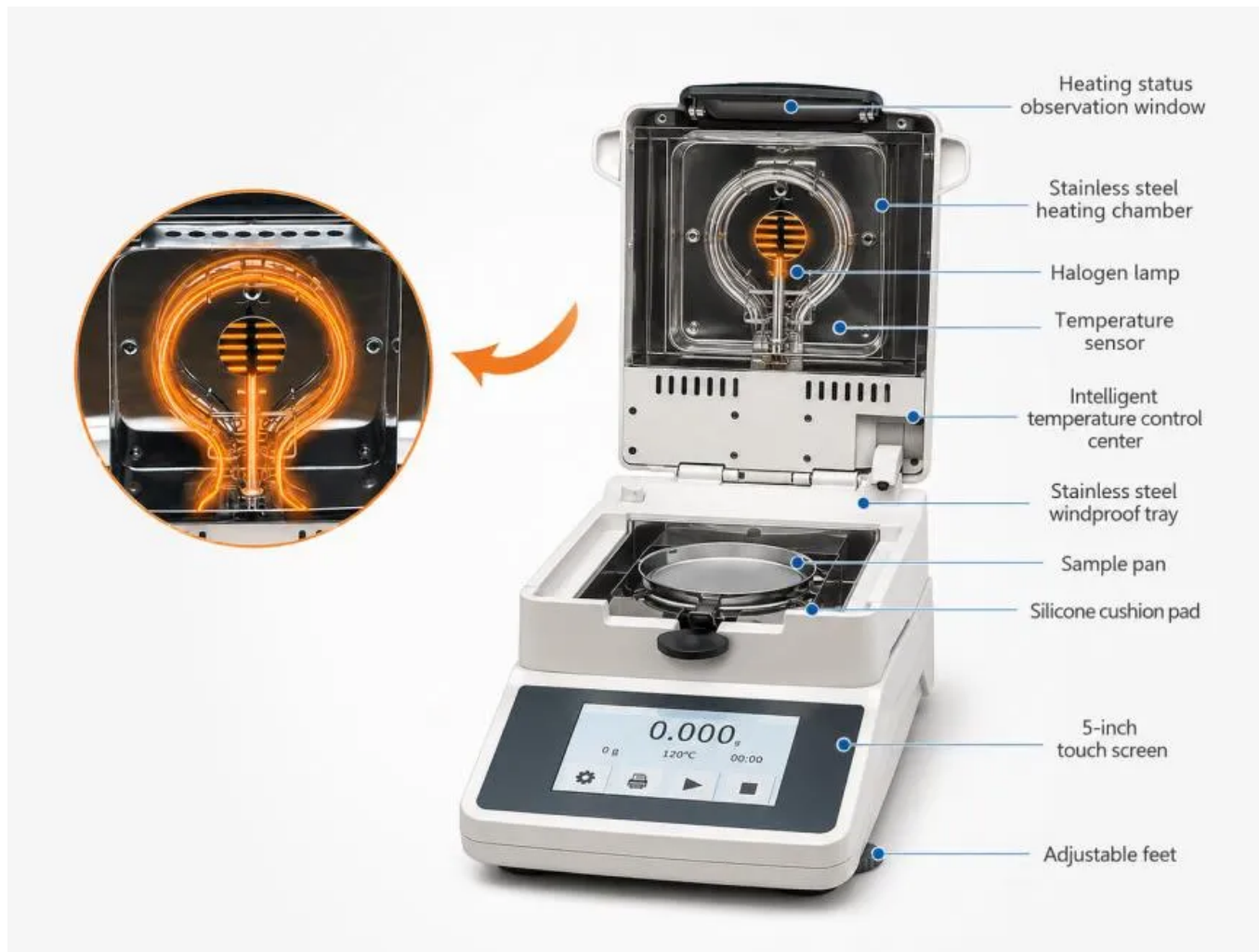
Theory and Method

The ToronMA™ T Series determines moisture content using the drying loss method, weighing the sample continuously during halogen lamp heating and calculating the moisture percentage lost from initial mass. The halogen lamp heats the $\phi 90$ mm sample pan radially across the 40–199°C range, reaching set temperature more rapidly than convective oven methods. An intelligent temperature control center and thermal resistance sensor maintain the target drying temperature throughout the cycle. A real-time curve plots moisture percentage against elapsed time on the 5-inch touchscreen.

The stainless steel mirror windproof tray beneath the heating chamber blocks air currents from below the pan, while the silicone cushion pad beneath the tray absorbs bench vibrations before they reach the weighing cell. These two isolation layers support the measurement stability required for 1mg resolution during the drying cycle. The aluminum sample pan works with an insulated carry basket, allowing safe removal of the hot pan without direct contact. Adjustable feet and a side handle support level positioning and single-operator transport between workbenches.

TECHNICAL SPECIFICATIONS

Touch Screen Halogen Moisture Analyzer - ToronMA™ T Series Technical Specifications



MOISTURE DETERMINATION

Model: ToronMA™ T

Heating Mode: STANDARD

Stop Mode: AUTOMATIC

Heating Temp: 130°C

Heating Time: 4:05

Wet W: 3.210g

Dry W: 2.815g

Moisture: 12.21%M

 PRINT SAMPLE

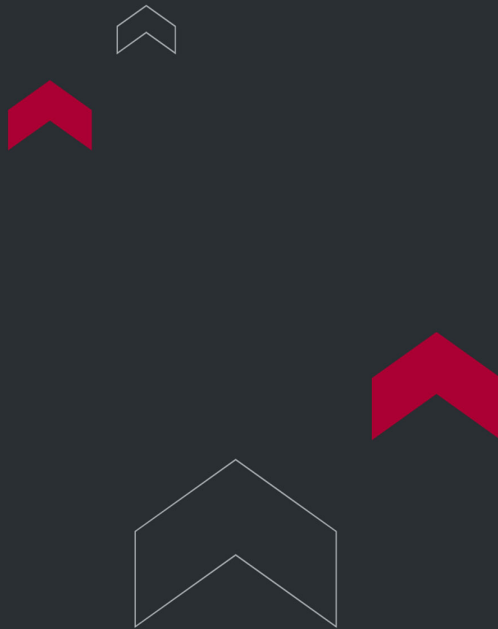
ToronMA™ T100

Parameter	Specification
Capacity	110 g
Readability	1 mg (0.001g)
Pan Size	φ90 mm
Moisture Range	0.00%-100.00%
Moisture Readability	0.01%
Dry Range	100.00%-0.00%
Dry Readability	0.01%
Heat Source	Halogen lamp
Temperature Sensor	High-precision thermal resistance
Temperature Range	40°C-199°C, 1°C Step
Display	5-inch color touch screen
Calibration Mode	External
Time Setting	1-99 min, 10s Step
Working Temperature	15-30°C
Interface	RS232
Data Storage	20 storage addresses, 20 historical records
Heater Power	220V ±15%, 50Hz / 110V ±15%, 60Hz; 400W

Parameter	Specification
Balance Power	Input: 220V 50Hz / 110V 60Hz; Output: 9V
Product Dimensions (W × D × H)	365 × 235 × 185 mm
Packing Dimensions	485 × 340 × 350 mm
Gross Weight	7 kg

Optional Accessories

Accessory	Description
Grinder	Sample preparation grinder for particle size reduction before moisture testing
Printer	External RS232 printer for GLP-format hard-copy moisture results
Aluminum Carry Box	Protective transport case for field and mobile deployment



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