

fully automatic moisture analyzer for coal and coke

Fully automatic moisture analyzer is an intelligent laboratory equipment designed for the moisture analysis of solid, powder and granule samples, integrating automatic weighing, intelligent temperature control, programmed drying and data output.

Fully automatic moisture analyzer is widely used in coal, grain, chemical industry, building materials, pharmaceuticals and other fields of moisture control and quality testing, to meet the dual needs of rapid detection and standard method verification.

Main Features of Fully Automatic Moisture Analyzer

1. intelligent control platform: based on the control system with high-definition touch screen, to achieve the visualization of the operating process, real-time status feedback and offline automatic operation, without the need for an external computer.
2. precision drive system: stepper motor linkage angle encoder, to ensure that the weighing position accurate alignment, improve the efficiency of sample processing.



3. high-performance electronic balance: built-in high sensitivity analytical balance, with automatic weighing, stability identification and multi-sample continuous weighing function, suitable for different working modes.
4. Dual heating mode: support blast heating and light wave infrared heating, according to the characteristics of the sample to choose air drying or nitrogen drying program.
5. PID intelligent temperature control: the application of closed-loop control algorithm, temperature control is more accurate and stable, the furnace chamber is made of stainless steel, corrosion-resistant, heat conduction is uniform.
6. Intelligent data management: with automatic printing, storage, power failure memory and breakpoint renewal test function, test data support docking LIMS system, to achieve zero data loss and automatic archiving.
7. automated protection: abnormal automatic diagnosis and alarm protection to ensure the safety and stability of the test.

Core Advantages

1. truly unattended: automatically complete the weighing, heating, drying, judgment and calculation process, significantly reducing human intervention.
2. legal arbitration standards compatible: support for the setting of checking drying time and arbitration test procedures, test results can be used for standard arbitration and quality certification.

3. high repeatability and stability: data fluctuation is small, test results are reliable, suitable for high-frequency testing scenarios.
4. strong environmental adaptability: can print the current laboratory environment temperature and humidity information, easy to trace and verify.

Working Principle

Fully automatic moisture analyzer is mainly based on the principle of thermogravimetric method, through the heating and drying of the sample, and real-time monitoring of its quality changes to calculate the moisture content. The process is as follows:

1. automatic weighing: the device automatically weighs the sample to be tested into the sample tray.
2. program temperature control: start the blast or light wave heating, drying at the set temperature.
3. quality change monitoring: the electronic balance continuously records the change in the quality of the sample.
4. the end point determination: when there is no significant change in the quality within a certain period of time, it is regarded as the completion of the drying process.
5. the results of the calculation: the system automatically calculates the moisture content, outputs a report and stores the record. Output report and store records.

This principle can effectively eliminate human error and ensure the objectivity and consistency of the results.

Application Areas

1. coal industry: used for moisture determination of coal samples, guiding the calculation of calorific value and combustion control.
2. Grain testing: analyze the storage suitability of wheat, rice, corn and other agricultural products.
3. Chemical industry: Measure the moisture residue in plastics, resins, powder raw materials and so on.
4. Pharmaceutical and food industry: Evaluate the level of moisture control in pharmaceuticals and food products to ensure product stability.
5. Building materials and minerals: Detecting the moisture content of raw materials such as cement, lime and ore.
6. third-party testing organizations and quality inspection units: for arbitration testing or statutory report issuance.

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Model	MA20
Temperature Control Range	ambient+10°C to 150°C
Temperature Control Accuracy	±2°C
Automatic Sample Feeding	yes
Sample Mass	Air-dried basis ±0.1g, Particle size ≤ 0.2mm Total moisture 10g to 12g, Particle size ≤ 6mm
Number of Samples	20 samples per batch
Test Time	Timing can be set according to the national standard or based on constant weight, taking approximately 20 to 40 minutes
Repeatability	Complies with GB/T 212-2008, GB/T 211-2017 Method for Determination of Moisture in Coal and GB/T 30732-2014 standards for instrumental methods of coal proximate analysis

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Model	MA20
MCPC Module	yes
Built-in Balance	yes
Data Upload	yes
Test Method	Air or Nitrogen
Touch Screen	yes
External Dimensions	580x650x660mm
Power supply	220Vac, 50Hz, 1.6kw
Weight	75kg