



# ULTRA CENTRIFUGAL MILL

Feed size: □ 10mm

Final fineness: □ 40μm

Speed: 6000-20000rpm

The Ultra Centrifugal Mill FM200 is suitable for a broad spectrum of samples. Leveraging its highly efficient grinding technology and a comprehensive set of accessories, it can rapidly perform both dry and wet grinding. It utilizes a two-step grinding process involving a rotating knife and a ring screen system, allowing for the quick processing of soft, hard, brittle, and fibrous samples.

## APPLICATIONS

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- **Sample types:** Soft, elastic, fibrous, water-containing, dry samples.
- **Application fields:** Agriculture, environmental analysis, electronics, RoHS testing, coal analysis, chemistry, plastics, medicine, feed analysis, grain analysis, dry plant analysis, and more

Ultra Centrifugal Mill

### Versatile Applications, Effective Sample Preparation:

- **Environmental Conservation:** Preparation of plant samples (roots, stems, leaves, etc.), C.H.N determination.
- **Coal and Coatings:** Sample preparation for ash content and thermal measurements.
- **Analysis of Nitrogen and Protein Composition:** Identification of nitrogen and protein composition in feed and food.
- **Secondary Fuel and Waste:** Determination of harmful substances in secondary fuel, waste, plastics, and electronic components.

## Ultra Centrifugal Mill

### FEATURES

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- Achieves a final fineness of less than 40µm.
- User-friendly touch control panel for convenient and speedy operation.
- Operates with low noise, reliability, and ease of cleaning.
- Offers a wide selection of accessories to accommodate diverse applications.
- Fineness is determined by the ring sieve in use.
- Adjustable speed ranging from 6000 to 18000rpm.
- Utilizes a two-stage rotor-ring sieve system for rapid grinding.
- Rotor with a diameter of 95mm and a peripheral speed of up to 94.2 m/s ensures efficient grinding.

### THEORY & METHOD

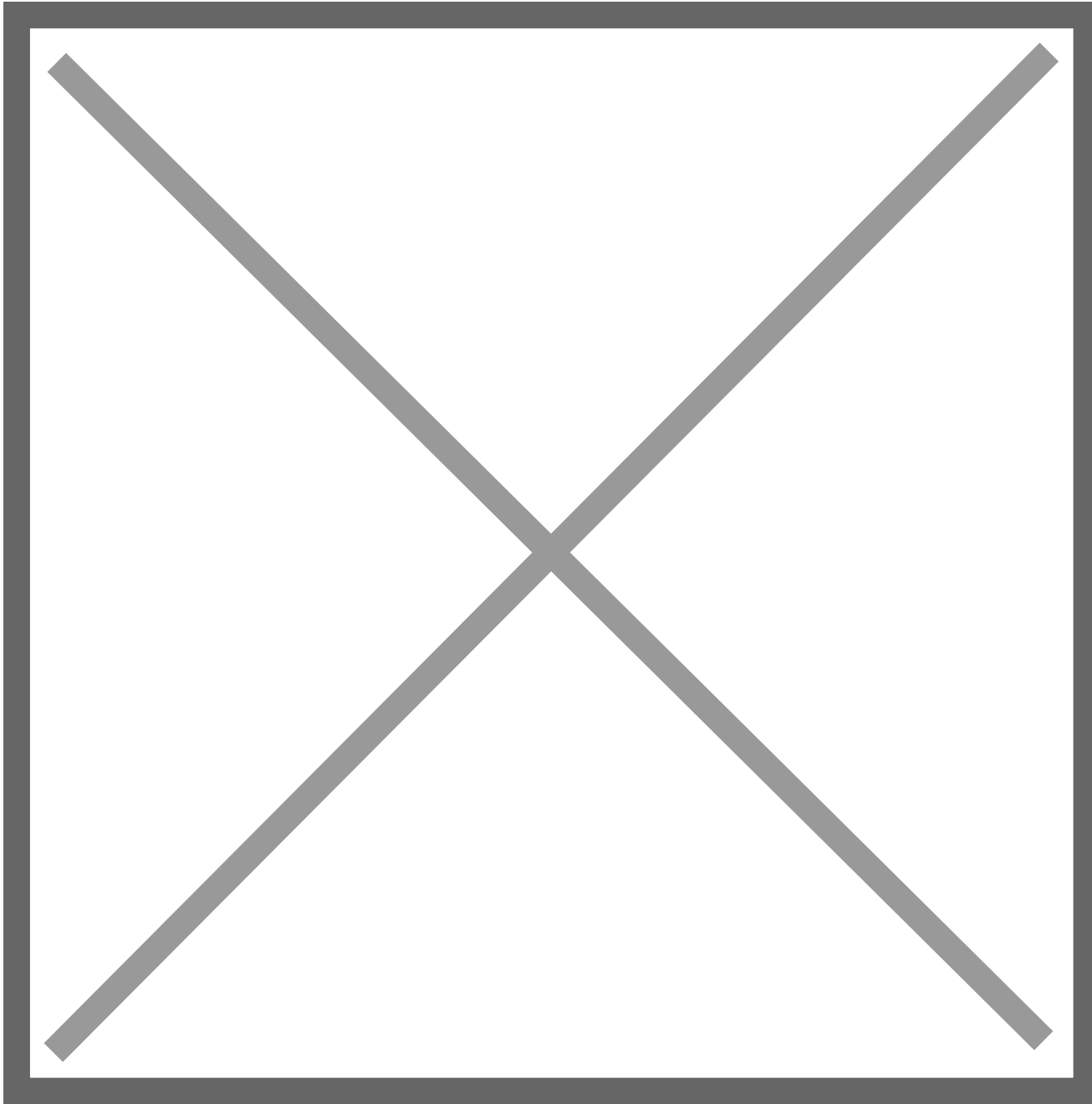
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#### Working Principle

The Ultra Centrifugal Mill achieves a two-stage crushing process using the rotor and ring sieves. Samples are introduced through a hopper designed to prevent splashing. The combination of high-speed centrifugal force and the rapid rotor movement generates a significant impact force, serving as pretreatment for the samples.

Subsequently, the samples undergo shearing, extrusion, and rubbing between the rotor and ring sieves. When the sample size becomes smaller than the aperture of the ring sieves, it is collected in a pan.

This two-stage crushing approach ensures moderate and efficient grinding results. Thanks to the high crushing efficiency, samples spend a relatively short time in the grinding chamber, preventing alterations in sample properties.



# TECHNICAL SPECIFICATIONS

## Technical highlights

- A specially designed air passage ensures a consistent airflow in the grinding chamber to cool both the rotors and samples.
- A double-layer wear-proof seal ring separates the grinding chamber from the driving motor, preventing dust from entering the motor.
- Dual protection mechanisms include an electronic lock and a mechanical lock for operator safety.
- An anti-splashing hopper effectively prevents feedstock blockages and reduces noise levels.
- Special adapters are available for accommodating large-capacity collections.
- The motor features overload protection, allowing it to continue running after a restart following an overload.

## Automatic feed device and large sample receiver

- The Ultra Centrifugal Mill FM200 can be fitted with an automatic feed device to ensure consistently homogeneous grinding outcomes and prevent the possibility of sample feed overload.
- Ground samples are gathered in a collecting pan, facilitating easy and loss-free sample collection while preventing cross-contamination.

|                  |               |
|------------------|---------------|
| Feed size        | < 10mm        |
| Final fineness   | < 40µm        |
| Speed            | 6000-18000rpm |
| Peripheral speed | 31.4-94.2m/s  |
| Rotor diameter   | 98mm          |

|                       |                                                           |
|-----------------------|-----------------------------------------------------------|
| Ring sieve            | 0.08□ 0.12,0.20,0.25□ 0.50,0.75□ 1.00,2.00mm              |
| Collecting pan volume | 900ml( volume of the sample collected no more than 300ml) |
| Rated power           | 760W/1300W                                                |
| Power supply          | 220V□ 50/60Hz (110V Also available upon request)          |
| Instrument size       | 400*506*495mm                                             |
| Package size          | 620*620*770mm                                             |
| Net weight            | 38kg                                                      |



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