

ULTRA CENTRIFUGAL MILL ZM 200



The Ultra Centrifugal Mill ZM 200 is a high speed rotor mill with unmatched performance. It is used for the **rapid size reduction of soft to medium-hard and fibrous materials.**

Because of the efficient size reduction technique the ZM 200 ensures the **gentle preparation of analytical samples in a very short time.** The comprehensive range of accessories including a large variety of ring sieves and rotors as well as collection systems makes the Ultra Centrifugal Mill a **versatile instrument** that can be easily adapted to varying applications. The optional Vibratory Feeder is load-controlled via an interface and ensures a uniform grind at maximum output rate. When **using a cyclone**, the sample **material is additionally cooled** by the air stream and more rapidly discharged from the grinding chamber via the cassette pan with outlet. This effect can be increased by connecting a vacuum cleaner.

With thousands of installations, the **ZM 200 has become a standard** for food and feeds, for the chemical industry as well as for agricultural testing.

APPLICATION EXAMPLES

bones, cereals, chemical products, coal, coffee beans, collagen, corn, dried fruit and vegetables, dried larvae, drugs, electronic components, feed pellets, fertilizers, food, minerals, paper, pharmaceutical materials, plant materials, polymers, powder coatings, rice, rubber, seeds, spices, straw, sweets, textiles, tobacco, waste, wood, ...

PRODUCT ADVANTAGES

- | Powerdrive with optimally matched frequency converter and 3-phase motor
- | gentle and very rapid size reduction by pre- and fine grinding in one run
- | wide speed range
- | maximum peripheral rotor speed 92.8 m/s
- | patented cassette system for maximum sample recovery and easy cleaning
- | easily exchangeable grinding and sieve inserts
- | defined final fineness due to ring sieves with aperture sizes from 0.08 - 10 mm
- | comfortable safety housing with automatic cover closure
- | motor compartment and electronics protected against dust and material penetration
- | comfortable parameter setting via display and ergonomic 1-button operation
- | wide range of accessories including various collection and feeding systems, rotors and sieves

FEATURES

Applications	fine grinding
Field of application	agriculture, biology, chemistry / plastics, construction materials, engineering / electronics, environment / recycling, food, geology / metallurgy, medicine / pharmaceuticals
Feed material	soft, medium-hard, brittle, fibrous
Size reduction principle	impact, shearing
Material feed size*	< 10 mm
Final fineness*	< 40 µm
Batch size / feed quantity*	300 ml with standard cassette 20 ml with mini-cassette 1000 ml with paper filter bag 4500 ml / 2500 ml / 450 ml / 230 ml with cyclone
Speed at 50 Hz (60 Hz)	6,000 - 18,000 min ⁻¹ , free selectable
Rotor peripheral speed	31 - 93 m/s
Rotor diameter	99 mm
Types of rotors	6-tooth rotor / 12-tooth rotor / 24-tooth rotor / 8-tooth mini-rotor
Material of grinding tools	stainless steel, titanium, steel 1.4404, stainless steel with wear-resistant coating
Sieve sizes	trapezoid holes 0.08 / 0.12 / 0.20 / 0.25 / 0.50 / 0.75 / 1.00 / 1.50 / 2.00 mm round holes 3.00 / 4.00 / 5.00 / 6.00 / 10.00 mm
Setting of grinding time	no
Collector capacity	900 ml with standard cassette 50 ml with mini-cassette 3000 ml with paper filter bag 5000 ml / 3000 ml / 500 ml / 250 ml with cyclone
Drive	3-phase asynchronous motor with frequency converter
Electrical supply data	different voltages
Power connection	1-phase
Protection code	IP 20
Power consumption	1300 W
W x H x D closed	410 x 515 x 365 mm
Net weight	~ 38 kg
Standards	CE

*depending on feed material and instrument configuration/settings

FUNCTIONAL PRINCIPLE

In the Ultra Centrifugal Mill ZM 200 size reduction takes place by **impact and shearing effects** between the rotor and the fixed ring sieve. The feed material passes through the hopper (with splash-back protection) onto the rotor. Centrifugal acceleration throws it outward with great energy and it is precrushed on impact with the wedge-shaped rotor teeth moving at a high speed. It is then finely ground between the rotor and the ring sieve. This 2-step grinding ensures particularly **gentle but fast processing**. The feed material only remains in the grinding chamber for a very short time, which means that the characteristic features of the sample to be determined are not altered. The ground sample is collected in the collecting cassette surrounding the grinding chamber or in the downstream cyclone or paper filter bag.



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