Semiautomatic Mill

QCX® M100M SEMIAUTOMATIC MILL

The M100M Semiautomatic Mill uses a fine pulverising process to prepare sample materials for X-ray florescence (XRF) and X-ray diffraction (XRD) analysis. It is suited for use with minerals, slag, ores, cements and raw materials.

Easy to use, operators choose from 16 processing programmes, where all the grinding parameters are adjustable, allowing you to consistently achieve the right particle size and good size distribution in your samples.

For XRD analysis, the mill's soft grinding method can be applied. Its slow-speed grinding reduces the applied force on the particles and avoids mineral changes, protecting the integrity of your samples.

The grinding vessels are easily exchanged at the end of the grinding cycle, allowing the next grinding cycle to promptly commence. The grinding vessels are available in chrome steel or tungsten carbide – this flexibility and choice means you can best match the vessel with the sample, supporting you to minimise cross contamination while also maximising milling performance and wear life.

ADVANTAGES

- **Performance:** as the strongest, most efficient mill in its class, the M100M Semiautomatic Mill outperforms its peers when it comes to consistency and quality in sample preparation and ease of use.
- **Affordability:** the mill is competitively priced and engineered with low-wear easy-maintenance parts to ensure a lifetime of value and trouble-free operation.
- **Safety:** a cover that is locked by a safety switch during operation to prevent accidental opening and a sound-proof grinding chamber ensure the safety of your operators.

CONSISTENT AND SAFE SAMPLE PREPARATION

How it works

The sample material is introduced into the grinding vessel and the lid is closed using a bearing-guided lever.

Your operator starts the mill by choosing one of the 16 processing programmes. Each programme guides the operator, via human-machine interface (HMI), through the preparation procedure.

The grinding vessel is placed at ergonomically correct height for convenient removal of the grinding bowl, and intelligent design prevents the operation from starting if it is not correctly clamped. The equipment lid is locked during the complete grinding process and is unlocked after the process is finished and the equipment is in the safe state.

Consistency of samples and safety of your operators are both given priority with this innovative unit.

Possible configuration

The M100M Semiautomatic Mill is designed for a side-by-side operation with P40M Semiautomatic Press. Together, the machines provide a complete X-ray sample preparation solution.

Specification

Sample material	Various minerals, slag, ores, cementitious and raw materials etc., up to 13 mm, up to 80°C
Sample quantity	15 – 100 cm^3
Hardness	Max. 9 Mohs
Final fineness	< 20µm
Processing programs	16
Grinding speed	700 - 1,500 rpm
Grinding time	5 - 600 sec.
Grinding vessel material	chrome steel or Tungsten carbide
Power supply	3 x 380 – 500 V; 50/60 Hz; 1.8 kW
Operating conditions	Temperature: 5°C to 35°C Humidity: 20 – 80 %, non-condensing
Weight	Approx. 410 kg
Dimensions (W x D x H)	680 x 700 x 1,270 mm

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