



SIEBTECHNIK TEMA



TS 1000-A

Automatic laboratory disc mill

Simple, fast and safe

Fill sample, grind and take out milled sample in the cup!

Sample preparation in a laboratory disc mill has already been a proven method for decades, especially in the application areas of geology, mineralogy, metallurgy, glass/ceramics industry, building materials industry, soil/plant analysis, power plants

Comminution in the laboratory disc mill takes place via grinding elements (stones/rings) in the grinding barrel, which are set into a rolling impact motion with very high forces by the circular oscillation of the grinding barrel. This enables fast, loss-free and reproducible fine comminution and homogenization of the samples.

The grinding barrels can hold sample batches of 50 - 1000 cm³ and the sample material is ground and homogenized to final finenesses of up to < 40 µm*1) in a single step. Thus, sample preparation in a laboratory disc mill is the ideal prerequisite for subsequent analysis using X-ray spectrometers, regardless of whether pressed tablets or melt tablets are produced from the ground samples.

With the automatic laboratory disc mill, the grinding barrel remains in the machine and does not have to be removed to take out the sample material.

This eliminates the need for the operator to handle the grinding barrel, which makes the work much easier and more ergonomic.

Operating sequence of the automatic laboratory disc mill

- ◆ Filling the sample material into the feed chute of the machine
- ◆ Starting the machine
- ◆ Sample material falls into the grinding barrel and is comminuted and homogenized according to the preset time and rotational speed
- ◆ Emptying the grinding barrel into a sample cup
- ◆ Output of the ground sample material in the sample cup
- ◆ Flushing the grinding barrel with compressed air and/or flushing material

The TS 1000-A can be upgraded to a fully automatic sample grinding station via optional sample magazines. In this case, the operator only has to fill the magazine with samples to be ground and remove the ground samples from the magazine. Depending on the selected size of the magazines, the machine can be operated autonomously for longer periods of time.



Ground sample quartz gravel



Versions of the TS 1000-A automatic laboratory disc mill

- ◆ Grinding barrels in chrome steel, tungsten carbide and zirconium oxide
- ◆ Grinding barrels with useful volume of 100, 250, 500 and 1000 cm³
- ◆ TS 1000-A installed in an automatic grinding and pressing plant (AMP), which combines all processes from the pre-crushing of faust-sized sample materials, the division, the fine grinding and the pressing of the powder into a tablet in one device.



The machine is operated via a touchscreen, which is used to make the following settings, among others:

- ◆ Variable grinding time
- ◆ Variable speed in the range 700 - 1200 rpm
- ◆ Variable flushing times and speeds
- ◆ Standard Operation Procedures (SOP)
- ◆ Direct access to the operating instructions



Automatic grinding and pressing plant AMP

Technical data

Automatic laboratory disc mill		TS 1000-A-100	TS 1000-A-250	TS 1000-A-500	TS 1000-A-1000
Dimensions (W x H x D)	mm	795 x 1480 x 875	795 x 1500 x 1100	795 x 1500 x 1100	795 x 1500 x 1100
Weight ^{*2)} , approx.	kg	605	760	770	790
Drive power	kW	0,85	1,5	1,5	1,5
Operating voltage		230 V, 1/N/PE, 50 Hz			
Compressed air		6 bar			

*1) The achievable fineness depends on the sample material, the grinding barrel and the instrument settings.

*2) Machine weights may differ by ±5% depending on the material of the grinding barrel.



SIEBTECHNIK TEMA

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We are experts in the field of solid-liquid separation and processing of bulk mineral materials – with more than 50 local sales offices and representatives worldwide.

Our product portfolio comprises:

Automation Solutions | Decanters | Conveyor Chutes | Gas Pycnometers | Sliding Centrifuges | Control Screening Machines | Laboratory Equipment | Sampling Plants
Sample Preparation | Pneumatic Post Systems | Setting Machines | Screening Machines
| Screen Scroll Centrifuges | Pusher Centrifuges | Vibratory Centrifuges | Dryers
Shredding Machines/Plants