

1.03.12 MULTIPLATE GRINDER (PEDOLOGY)





APPLICATION

The multiplate grinder with diamond grinding wheel 1 03 12 P permit automatic thining to a determinated thickness of rock bonded on glasses slides.

It is automatic, fast and accurate. It can grind simultaneously up to 3 thin sections 140x68 in a few minutes.

This machine replace the traditional manual techniques. It solves simply, automatically and efficiently the problems of manual sample preparation so familiar to many laboratories.

DESCRIPTION

Samples are stuck onto glass slides and are set on a circular plate which is slightly inclined. They remain in place simply be adhering to the glazed surface of the plate. They are prevented from moving sideways by a metal frame slightly thinner than the glass-slides.

The plate can take up to 3 slides 140x68. It is individually driven and rotates slowly.

A shaft, rigorously parallel with that of the plate, bears the diamond grinding wheel which can move along its shaft. The thin sections are presented facing the grinding wheel.

Using a sliding gauge, the operator brings the grinding wheel in contact with the samples and activates the automatic feed mechanism. This mechanism, moved by the rotation of the plate, ensures the advance of the grinding wheel. It stops automatically when the desired pre-set thickness is reached. The role of the operator is limited to lay out the samples on the plate and to start the machine. No monitoring is necessary. The stop of the automatic feed is indicated by luminous and/ or sound indicator.

PERFORMANCE

When the samples are carefully stuck on identically-calibrated glass-holders, it is possible to obtain thin sections at the requested thickness in a few minutes.



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PRESENTATION

The multiplate grinder 1 03 12 P is a rigid machine thanks to a very robust welded frame. The massive higher table supports the main components. Its light slope improves adherence of the glass slides on the plate, facilitates their installation and gives the operator a better visibility. The slide-holder plate is grinded in situ. The shaft of the grinding-wheel holder, interdependent with the automatic feed system, allows the easy replacement of the grinding wheel by preserving the quality of its alignment.

The automatic feed is adjustable from 5 to 20 μ per turn of the plate.

Watering plays a great role in the grinding of rocks. It influences considerably the wear of the grinding wheel. It decreases the structure degradation due to the heating. It contributes for a great part to the finish of the thin sections.

The integrated recycling watering uses light oil adapted to the hydrosensible samples. A transparent hood prevents the lubricant splashing.

CHARACTERISTICS

Electrical

Electrical supply: 230/400 V Three-phase (please specify

when ordering)

Grinder motor: 2 HP Plate motor: 1/6th HP Recycling motor: 1/3rd HP.

Power: 1.1 kW.

Capacity

Up to 3 thin sections 140x68 mm

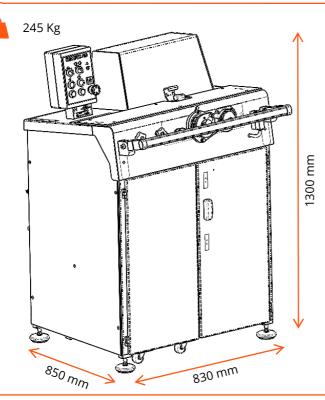
Recycling: Water in: Water out: 30L capacity Ø12 mm Ø30 mm

STANDARD EQUIPMENT

The multiplate grinder is given over completely with 2 diamond grinding wheels (Ø230mm grain D91 and D46), 1 sample-holder and 1 instruction manual.

- Oil cooling device
- Dimensions of the sample holders: 12x70, 135x58, 140x68
- Watering with light oil by recycling for materials being affected by water (clay-grounds).
- Thermal monitoring of the cooling agent in order to avoid the heating and the softening of the polyester resins impregnating the samples
- Grinding wheel command equipped with a fast-back crank, to facilitate the change of grinding wheel (D91 or D46).

The method of realisation of the thin sections recommended by the Agronomic Research Institute allows to finish the big sections on the machine







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