

RG AUTOMATION



The PM5K Automated Milling Machine

RG MILL© A new definition in automated sample preparation from RG Automation
PM5K establishes an industry standard in robustness and precise automatic sample preparation
Safe, fast and easy way to obtain optimum sample surface for optical emission and XRF analysis.

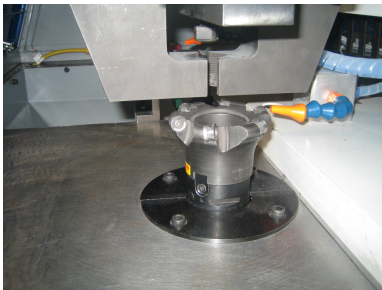
RG Mill

Engineered to Make a Difference



Repeatability

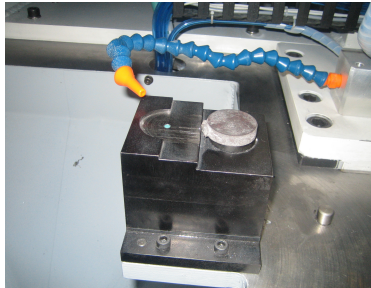
The key for optimum analyses using the OE and XRF spectrometer is the preparation of the sample surface. It needs to be “almost like a mirror”. This is achieved on the RG MILL in the same way every time. The PLC software controls the precision hardware to repeat this requirement time after time.



Simplicity

The best design is a simple design. The RG MILL is based upon positioning the components, sizing the components and managing the components for the job to be done.

The **RIGHT POSITION**, the **RIGHT SIZE**, the **RIGHT SPEED** and the **RIGHT WEIGHT** deliver the **RIGHT RESULTS** by having the perfect balance for each of these elements.



Safety

Safety comes in the design and engineering of the PM5K. Once the process of preparation begins, the PM5K manages the handling of the specimen from start to finish.

The PM5K incorporates:

- A **Security Door Switch** that locks the door as the specimen is being prepared.
- **Door Materials** that are shock resistant.
- A **Sample Gripper** that is safe in the event of a pneumatic failure.



Modularity

RG MILL is modular. The PM5K can be integrated into a fully automated laboratory. As part of the AutoLab family of products, the RG MILL is designed to work with SpectroMate, SpectroMate Jr. and TransAir (pneumatic transport systems)



Control

The control of the RG MILL is one of the key factors making the milling operations successful. An easy to use touch control panel incorporates all of the elements necessary for efficient operation and maintenance.

The diagnosis capability and the friendly menu give the user control of thirty (30) different milling programs which can be accessed and configured in less than 30 seconds. This makes the RG MILL the perfect choice for quick and reliable sample preparation.

Options

- Sample Magazines

a) Carrousel which will manage up to 30 samples integrated on the RG MILL (before and/or after milling)

b) Spiral magazine with capacity for up to 100 samples.

- Transport Systems

a) TransAir pneumatic transport system

b) Transport Belts

c) Pneumatic linear conveyors.

TECHNICAL DATA FOR THE RG MILL

Basic Models

- PM5K-1CF-CMDM (1 Milling head, manual upload/download)
- PM5K-2CF-CMDM (2 Milling head, manual upload/download)
- PM5K-1CF-CADA (1 Milling head, automatic upload/download)
- PM5K-2CF- CADA (2 Milling head, automatic upload/download)

Dimensions LxWxH

Aprox. 1100x1000x2000

Weight:

Aprox. 1600 kg

Milling head:

- Depending on sample shape, basically 6 cutter tip.
- Up to 2000 rpm
- Pneumatic gripper

Electrical and Control:

- 220/440 3 phases 50/60 Hz.
- 7.5 KVA
- Modicon PLC
- Touch screen 7" color panel in swivel arm.
- Frequency drivers.
- Voltage control; 24 vdc or 120 vac
- Protection class IP44

Air supply:

- Pressure; 4 bar min. (60 psi)
- Flow; 200 lpm
- Consumption; 100 liters per sample

Process Parameters:

- Cutting depth; Max. 2 mm
- Cycle time; 18-30
- # of programs; 30
- Material Sample; Steel and iron
- Hardness; 65 RC max.
- Shape; Oval/round, no pin
- Dimensions; Diam.; 30-60 mm
Height; 7-60mm
- Temperature; Max. 800°C

Cooling

- Cooling media; Compressed air
- Cooling Type; Trough cooling nozzles



The Lab Automation Specialist

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