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|  | **PLANETARY BALL MILL****Name of the equipment:** Planetary Ball Mill**Make & Model:**Retsch, Germany PM 100**I-Stem Registration ID-** **3224880** **Category of Instrument**Mechanical Alloying / Comminution**Types of Analysis / Testing**Particle size reduction**Application:** Milling hard, medium-hard, soft, brittle, or fibrous materials**Description of Instrument**The PM 100 reduces materials to sub-micron sizes through high-energy impact and friction, ideal for sample preparation and nanomaterial synthesis. |

**Booking Details**

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| **Book through I-STEM:** <https://www.istem.gov.in/>**Slot Booking Link**[I-STEM Slot Booking link for External User](https://www.istem.gov.in/equipment-info/24880/Planetary-Ball-Mill) | **Booking available for**Internal and External Both**Requisition form for** InternalsExternals |

**Contact Details**

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**Features, Working Principle and Specifications**

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| Planetary Ball Mill |
| Feed material | soft, hard, brittle, fibrous - dry or wet |
| Size reduction principle | impact, friction |
| Material feed size\* | < 10 mm |
| Final fineness\* | < 1 µm, for colloidal grinding < 0.1 µm |
| No. of grinding stations | 1 |
| Speed ratio | 1 : -2 |
| Sun wheel speed | 100 - 650 min-1 |
| Effective sun wheel diameter | 141 mm |
| G-force | 33.3 g |
| Type of grinding jars | "comfort", optional areation covers, safety closure devices |
| Material of grinding tools | zirconium oxide |
| Grinding jar sizes | 500 ml |
| Setting of grinding time | digital, 00:00:01 to 99:59:59 |
| Interval operation | yes, with direction reversal |
| Interval time | 00:00:01 to 99:59:59 |
| Pause time | 00:00:01 to 99:59:59 |
| Drive power | 750 W |
| Electrical supply data | different voltages |
| Power connection | 1-phase |
| Power consumption | ~ 1250W (VA) |
| W x H x D closed | 640 x 480 (780) x 420 mm |
| Net weight | ~ 86 kg |
| Standards | CE |

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**Type of Sample Required for Analysis / Testing (Quantity, Pre-Preparation, State etc.) Guidelines for Sample Submission – User Instructions**

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| * Sample Type: Metals, Alloys & other Materials
* Type of Samples to be Analysed - Metallic
* Maximum No. of Samples Accepted at a Time- 1
* Minimum No of Days Required for Analysis – 2 Days
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**User Charges Rs. (GST Extra)**

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| **Internal** | **External Academic Institutes** | **National R&D Lab** | **Industry** |
| 300/- per hour | 600/- per hour + GST | 600/- per hour + GST | 600/- per hour + GST |