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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**  Internals  Externals |

**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 | |

**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 |

**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 |