**5 AXIS CNC COORDINATE MEASURING MACHINE**

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| https://lh7-rt.googleusercontent.com/docsz/AD_4nXd1cM7m-T4rNdItVrBKJgQmkm3hxO1VUAZjuk9fIIgTjBnk4I47K9IzRvgRFBxNLjLPEegbOJytQpGolivZ0LZLZoYSa3rKo0En89yoEgp7MuYcLjQrJ-ru2jPNUbgos0xQw-WpSUfp58f2nfXw_OSE_Y5sxKrL2Cx7NrsxJ6kJRiqNBx1CCA?key=oZTaWzDdDbOlt2PI8Jp0Aw | **Name of the equipment:**  5 AXIS CNC COORDINATE MEASURING MACHINE  **Make & Model:**  Mitutoyo- Bright A 504  **I-Stem Registration ID-**  **3224852**  **Category of Instrument**  Characterization and Testing  **Types of Analysis / Testing**  coordinate measurement  **Application:**  Measurement errors in circularity, cylindricity, concentricity, straightness, coaxiality, flatness, parallelism, perpendicularity, angularity, runout etc.can be determined using this software. Measurement results are available in tabular/graphical form  **Description of Instrument**  The Mitutoyo Bright A 504 is a high-precision 5-axis CNC Coordinate Measuring Machine (CMM) designed for accurate dimensional inspection in industries such as aerospace, automotive, and precision manufacturing. It offers a measuring range of 500 mm × 400 mm × 400 mm along the X, Y, and Z axes, with a high resolution of 0.1 µm and accuracy in the range of ±3 to ±7.6 µm |

**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/24852/5-Axis-CNC-Coordinate-Measuring-Machine--CNCCMM-) | **Booking available for**  Internal and External Both  **Requisition form for**  [Internals](https://randc.nitc.ac.in/pdf/instruments/med/20.%20Internal.pdf)  [Externals](https://randc.nitc.ac.in/pdf/instruments/med/20.%20External.pdf) |

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| **Faculty In-charge:**  Dr Jos Mathew  **Email ID:**  josmat@nitc.ac.in  **Phone number:**  0495 2286405 | **Contact Details**  **Technical Staff:**  Mr. Unni Krishnan (TA) **kishan@nitc.ac.in** | **Department -** MED  **Office Email ID**  [medoffice@nitc.ac.in](mailto:medoffice@nitc.ac.in)  **Location**  PRODUCTION BLOCK, Department of Mechanical Engineering  **Lab Phone No**  0495 228 6476 |

**Features, Working Principle and Specifications**

**Contact Details**

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| **Features of the equipment**   * 5-Axis Probing System * High Precision & Accuracy * CNC Automation * High-Speed Scanning * Flexible Probing Options | **Unique features/Measurement capabilities, if any**   * Unlike traditional 3-axis CMMs, the 5-axis probe head allows rotational movement during measurement * It significantly reduces inspection time, improves access to complex geometries, and enhances measurement flexibility and accuracy |
| **Instrument Technical Description and Major Specifications (This Specifications Limited to Major 5)**   * **Working Area -**638mmx860mm * **Probe System -**HP10T AND HP20 of Renishaw, England  |  |  | | --- | --- | | * **Repeatability** | * 3μm |  * **Measuring Range** X 505, Y 405, Z 405 | **Measurement/Sample specifications:**   * Metallic/composite/alloys etc., |

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

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| * Sample Type: Metallic/composite/alloys etc., * Maximum No. of Samples Accepted at a Time- 2 * Minimum No of Days Required for Analysis – 1 |

**User Charges Rs. (GST Extra)**

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| **Internal** | **External Academic Institutes** | **National R&D Lab** | **Industry** |
| 300/- per hour | 300 + 18%GST  Rs. 354 | 300 + 18%GST  Rs. 354 | 300 + 18%GST  Rs. 354 |