**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**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

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| **Instrument Technical Description and Major Specifications (This Specifications Limited to Major 5)*** **Working Area -**638mmx860mm
* **Probe System -**HP10T AND HP20 of Renishaw, England

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| * **Repeatability**
 | * 3μm
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* **Measuring Range** X 505, Y 405, Z 405
 | **Measurement/Sample specifications:** * Metallic/composite/alloys etc.,
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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: Metallic/composite/alloys etc.,
* Maximum No. of Samples Accepted at a Time- 2
* Minimum No of Days Required for Analysis – 1
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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 | 300 + 18%GSTRs. 354 | 300 + 18%GSTRs. 354 | 300 + 18%GSTRs. 354 |