500kN SERVO HYDRAULIC ACTUATOR SYSTEM

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|  | **Name of the equipment:**  500kN Servo Hydraulic Actuator system  **Make & Model:**  BISS, Bangalore  Bi-03-Ec-801-05  **I-Stem Registration ID-**  **……………………..**  **Category of Instrument**  (Advanced Manufacturing facility / Characterization and Testing / Computational Facility / Bioscience and Technology / Sample preparation)  **Types of Analysis / Testing**   1. Quasi static cyclic load testing on beam column joint 2. Cyclic three-point load testing on beam 3. Lateral cyclic load test on concrete frame   **Application:**   1. Strain controlled load application 2. Quasi static reverse cyclic loading.   **Description of Instrument**  A 500kN Servo Hydraulic Actuator system  bio-printer for engineers and researchers |

**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/)  **Contact Details** | | **Booking available for**  Internal and External Both  **Requisition form for**  [Internals](https://randc.nitc.ac.in/pdf/instruments/civil/CED-REQUISITION_FORM_Internal.pdf)  [Externals](https://randc.nitc.ac.in/pdf/instruments/civil/CED-REQUISITION_FORM_Internal.pdf) | |
| **Faculty In-charge:**  Dr. Ajeesh S. S.  **Email ID:**  [ajeeshss@nitc.ac.in](mailto:ajeeshss@nitc.ac.in)  **Phone number:**  [0495 228 6238](tel:0495%20228%206238) | **Technical Staff:**  Noushad K K (TA) [noushadkk@nitc.ac.in](mailto:noushadkk@nitc.ac.in)  Jeyeshkumar (TA)  [jeyesh@nitc.ac.in](mailto:jeyesh@nitc.ac.in)  Nithya B S (TA) [nithyabs@nitc.ac.in](mailto:nithyabs@nitc.ac.in) | | **Department**  CED  **Office Email ID**  [cedoffice@nitc.ac.in](mailto:cedoffice@nitc.ac.in)  **Location**  Structural laboratory, Department of Civil engineering  **Lab Phone No**  04952286840 | |

**Features, Working Principle and Specifications**

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| **Features of the equipment**  Servo hydraulic actuator is double ended double acting high precession linear actuator. | **Unique features/Measurement capabilities, if any** |
| **Instrument Technical Description and Major Specifications (This Specifications Limited to Major 5)**  **Model:** AC-02-0250S  **Capacity:** Compression 500kN, Tension 350kN | **Measurement/Sample specifications:**  **Stroke(mm):** ±75mm  **Actuator area(mm2):** Compression 25446.9; Tension 15943.58  **Rod Thread (Depth) in mm:** M50x2(70) |

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

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| * Scale down model which matches with the Reaction frame and supporting floor. * The expected failure load is below 100kN * Any specific support condition required need to fabricated |

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

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| **S.NO.** | **Type of Analysis / Testing** | **Internal -** | **External Academic Educational Institutes** | **National R&D Labs** | **Industry** |
| 1 | Axial Compression or Flexure (Cyclic/Monoto nic) | 1000 per Hour | 2000 per Hour | 3000 per Hour | 4000 per Hour |
| 2 | Axial Compression or Flexure  (Cyclic/Monoto nic) | 1000 per Hour | 2000 per Hour | 3000 per Hour | 4000 per Hour |
| 3 | Axial Compression or Flexure (Cyclic/Monoto nic) | 1000 per Hour | 2000 per Hour | 3000 per Hour | 4000 per Hour |