**Film and Dropwise condensation unit**

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|  | **Name of the equipment:**  Film and Dropwise condensation unit  **Make & Model:**  SolTeq Solution & Sdn.BHD, HE 178®  **I-Stem Registration ID-**  **3224903**  **Category of Instrument**  Educational training system  **Types of Analysis / Testing**  Heat Transfer Coefficient Determination  Effect of Surface Coatings  Impact of Operating Conditions  **Application:**  Educational Demonstrations  Applied to improve the design of condensers in power plants and refrigeration system  **Description of Instrument**  The SolTeq HE 178 Filmwise and Dropwise Condensation Unit is an educational apparatus designed to demonstrate and analyse the two primary modes of steam condensation: Filmwise and dropwise. |

**Booking Details**

**Contact 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/24903/Unsteady-Heat-Transfer-Unit-and-Flim-and-Dropwise-Condensation-Unit) | **Booking available for**  Internal and External Both  **Requisition form for**  Internal  External |

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**Features, Working Principle and Specifications**

**Contact Details**

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| **Features of the equipment**   * Dual Condenser Design * High-Quality Construction of condensers * Integrated Instrumentation | **Unique features/Measurement capabilities, if any**   * Dual Condenser Design for Comparative studies * Integrated Temperature and Flow Measurement |
| **Instrument Technical Description and Major Specifications (This Specifications Limited to Major 5)**   * Steam Chamber made of Borosilicate Glass cylinder * Condenser Diameter: 12.7mm; Length:120mm * Coiled heater with thermal protection, Power:3kW * Air Extraction System: Includes air cooler, separator, and water jet vacuum pump. * Pressure Switch to turn off the heater when chamber pressure exceeds 1.20 abs bar | **Measurement/Sample specifications:**   * To measure the pressure within the steam chamber * Typically, distilled water is used to generate steam for the condensation process |

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

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

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| **Test Details** | **Internal** | **External Academic Institutes** | **National R&D Lab** | **Industry** |
| NA | NA | NA | NA | NA |
| NA | NA | NA | NA | NA |