

SI No.	Description of items	Quantity
PUR/517/ERT/BB/E/2019-20		
1	SUPPLY INSTALLATION TESTING AND COMMISSIONING OF THERMAL CONSTANTS ANALYSER	1

1. **INSTALLATION, COMMISSIONING AND TRAINING**

- 1.1. The ordered goods are required to be installed within 15 days of receipt of goods at final destination. Installation should be carried out only by expert engineers of Supplier / Manufacturer. During the course of installation, necessary training on operation and maintenance of the goods shall be imparted to Institute's, Scientist / Engineers/Technicians.

2. **WARRANTY**

- 2.1. Comprehensive on-site warranty for a period of one year must be provided to be effective from the date of completion of installation and commissioning and final acceptance of the items / equipment at the user's laboratory / Institute.

Supply, Installation & Commissioning of Thermal Constants Analyzer

1	<p>Measuring the thermal constants for solids materials</p> <p>(System should also have future upgrade capability for measuring the thermal constants of liquids & powders)</p>
2	<p>Thermal Conductivity Range: 0.01 to 1000 W/(m.k) or more Thermal Diffusivity Range: 0.1 – 1000 mm²/s or more Specific Heat: 0.1 to 5 MJ/m³ Precision: better than 1% Accuracy: better than 5%</p> <p>(System should also have future upgrade capability to higher range)</p>
3	<p>Analysis time : 5 min or less</p>
4	<p>Analysis Temperature: Normal temperature</p> <p>(System should also have future upgrade capability to higher temperature)</p>
5	<p>International Standard: Conform to ISO 22007-2</p>
6	<p>Sample dimension: Min- 20 mm dia, Max- any size</p>
7	<p>The contact pressure of sensor to sample surface should not influence the measurement result</p>
8	<p>Software: Software should be capable of transferring data to MS EXCEL, software should support later upgradation and control of other modules or sensor types</p>
9	<p>Computer with OS: Computer (i7 or higher with original Windows 10 operating system, RAM: 4 GB or more, HD: 512 GB or more)</p>
10	<p>UPS: 02 KVA online UPS</p>
11	<p>Warranty: 1 year from the date of installation</p>
12	<p>Reference material: Reference material for calibration of thermal constants of solid</p>
13	<p>Training: Training should be provided for the CSIR-CMERI officers on the operation & maintenance of equipment at CSIR-CMERI, Durgapur, west Bengal</p>
14	<p>Calibration: The system should be factory calibrated. All the sensors should have the traceability certificate for complete range of measurement.</p>
15	<p>Instruction manual should be provided</p>
16	<p>Scope of supply: Supplier should clearly list out the scope of supply and optional items like spares, accessories etc.</p>
17	<p>Customer list: A list of 03 Indian customers to whom similar systems are supplied during the past five years as on the date of bid opening should be provided. Copy each of the Purchase Orders and the corresponding Installation/Commissioning certificates to be furnished with bid.</p>
18	<p>Supply of spares: The vendor shall ensure supply of spares for at least for 5 years</p>