

**INDIAN INSTITUTE OF TECHNOLOGY  
DEPARTMENT OF CIVIL ENGINEERING**

**Enquiry letter for purchase of CCNC**

**Sub: Quotation for supply, installation, commissioning and training of Cloud Condensation Nuclei Counter (CCNC)**

**Reference: IITK/CE/2015/1005**

**Dated: May 25, 2015**

Sir / Madam,

With reference to the subject mentioned above, you are invited to submit the quotation in a sealed cover. Configuration/Specifications are given below:

**Specifications of Cloud Condensation Nuclei Counter (CCNC):**

Technique	Activation of CCN particles at constant super-saturation maintained in a vertical column with continuously wetted walls and a longitudinal thermal gradient; sizing of the activated droplets using an optical particle counter
Aerosol Medium	Air, 5 - 40 °C (41 - 104°F)
Number Concentration Range	upto at least 20,000 particles/sec at super-saturations above 0.3%
Measured Particle Size Range (after supersaturation)	~ 0.75 – 10 µm
Number of Particle Size Bins	15 - 20
Sampling Frequency	1 Hz
Super-saturation Range	0.07% - 2.0%
Time Required for SS Change	~30 seconds for 0.2% change
Maximum Number of Automatically Scanned Super-saturation Settings	250
Optical Particle Counter Laser	635 - 660 nm, 35 mW
Flow Range	Total flow: 200 – 1000 vol. cc/min Sample flow: 20 – 100 vol. cc/min Sheath flow: 180 – 900 vol. cc/min

Flow Control	Total flow should be adjustable from within system software. Sample/Sheath flow ratio should be adjustable Pump - Solenoid pumps for water; diaphragm pump for air
Display & connections	Computer monitor, water supply bottle System power switch LED for overall system power Watchdog light Air vents Inlet and exhaust valves Ethernet connection USB connection Mouse and keyboard connections Touchscreen connection Video connection LED power connection
Computer System	On-board Intel® 1 GHz processor or better 512 MB RAM (minimum) 80 GB hard drive for data storage or better User interface via standard keyboard and monitor
Software	CCN Counter Software, Playback Software
Data System Interface	RS-232/ USB
Data System Features	Onboard computer for control and data logging Touch screen control and display Serial data output for external computer
Calibration	Comparison of CCN Counter output to reference instruments (Differential Mobility Analyzer (DMA) and a CN Counter
Environmental Operating Conditions	Temperature: 5 – 40°C (41 – 104 °F) RH: 0 – 100% RH non-condensing

**The quotation should have the following details:**

1. Cost of the item and accessories and installation charges, if any

2. Technical specifications in detail
3. Warranty period
4. Educational discount considering end use for research and teaching
5. Payment terms
6. Proprietary Certificate, if applicable
7. Comprehensive AMC prices should be quoted separately
8. Any other relevant details

**Terms and condition:-**

1. Sealed Quotation must reach the undersigned on or before June 6, 2015.
2. Prices should be in USD and CIF Delhi.
3. Our Institute is partially exempted from custom duty.
4. The final selection will be made based on weights given to technical merit and pricing as 70% and 30% each, respectively.

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