

Department of Materials Science & Engineering  
Indian Institute of Technology Kanpur

Enquiry: MSE/KM/4 dated 29-06-2018

**Closing Date: 23-07-2018 Extended Date 06-08-2018**

We are in process to purchase a **Salt solution reservoir system** (Salt fog) immediately. The specifications of unit are as follows:

<b>Parameter</b>	<b>Specification</b>
1) Standard	ASTM (ASTM-B117)(essential) and equivalent ISO standard (desirable)
2) Temperature Range	Ambient to +50° C. As per standard is 35 <sup>0</sup> C, +1.1 <sup>0</sup> /-1.7 <sup>0</sup> C. is must. Temperature accuracy: ±1.0°C and resolution = 0.1°C.
3) Atomiser	Acrylic glass nozzle in spraying duct for optimum sprays fog distribution
4) Salt spray rate	1.0 to 2.0 ml/hour fog residual to be collected (average of 16 hour collection)
5) Saturator Temperature Range	Ambient to +65° C
6) Construction:	The entire housing of Salt spray corrosion test chamber should be made of non-corrosive materials like marine grade fiber glass that stands up to the relentless attack of the corrosive test environment. The removable outer body should be a fully insulated covering that ensures the chamber achieving maximum operating temperature if the chamber is located in a cool laboratory environment. Good thermal insulation so that the choice of materials guarantees long service life. Hydrostatic hood seal.
7) Measurement of spray fallout rate	One spray fallout collection pan should be provided in the workspace and fallout can be collected outside the chamber for measurement. It should meet requirement suggested in the standard.
8) Performance	The heating in the test chamber should ensure uniform temperature conditioning to the required set temperature. Condensation generated should be drained away through a floor drain, and the corrosive test chamber atmosphere should be vented through an exhaust vent. A separate salt solutions reservoir for continues running the test. Proper control over the salt solution spray rate and oil free spray. Air pressure regulator and pressure gauge for compressed air.
9) Control instrumentation	Eurotherm (UK make) Programmable microprocessor PID controller for Chamber Temperature and saturator temperature with digital display with RS 232 communication port for operating the chamber through PC as well as data logging facility. Tubular display & graphical display with complete history printing & storing facility. Ergonomic arrangements of the operating panel and display

	instruments. Proper time totalize and cyclic timer. Water level controller for saturator tower.
10) Safety Devises	Salt spray corrosion test chamber equipped with an emergency stop switch. Chamber and saturator tower (Bubbling) over temperature protection. Audio Alarm for low water level and over temperature. MCB protections for chamber heater & saturator heater. Low water level indication & protection for saturation heater. Complete electrical system provided to conform to the statutory regulatory requirements against safety, hazards, accidents and pollutions
11) Utilities	Drain outlet pipe with suitable fittings. Air Line for compressed air which can withstand 3-4 bar pressure.
12) Power Supply	230 VAC, 50 Hz, Single Phase
13) Chamber inner dimension	800 (L) X 750 mm (D) X 750 mm (H) and 450 litre capacity
14) Chamber should be design with Safety, Reliability and easy to operation as students will be user of this equipment for their research	
15) Details of Drain outlet, suitable fittings, water inlet, air line etc	
16) Three year warranty from the date of installation	
17) Maximum educational discount (if any) should be clearly mentioned	

Instrument should be research oriented means with highly protected and safe for usage in a research/ teaching lab by students.

You are requested to send a quotation (Sealed and in two bid system) for the above mentioned equipment with all details. All cost, terms and conditions should be clearly mentioned in the quotation. If you are the only authorized company to provide the services, please enclose proper authorization with the quotation in this regard. Proprietary certificate should be enclosed with the quotation. List of users and details of servicing centres should be cleanly mentioned. Minimum warranty will be three year.

The quotation in a sealed envelope with two bid system (technical & financial), in all its completeness, should reach us by 23-07-2018 (**Extended Date 06-08-2018**)at following address:

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