



**CSIR-INDIAN INSTITUTE OF CHEMICAL BIOLOGY**  
(COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH)  
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**PURCHASE ORDER**

M/s Sreekara Envirotech Private Limited, No. 409, 5 <sup>th</sup> Floor, Sir Srinivasa Nivas Apt, Old Bowenpally, Secunderabad-500011. Email: customersupport@set-pl.com	PO No.	IICB/PUR/24-25/599/623/369RT
	Date	13.02.25
	Subject	Procurement for Supply and Installation of Walk In Plant Growth Chamber
	Your Ref.	SET/24-25/PGC/IICB, dated 04.01.2025 and email dated 20.01.25 & 27.01.25

Sub: Award of contract for Supply and Installation of Walk In Plant Growth Chamber

Ref :

1. Your Quotation No.: SET/24-25/PGC/IICB, dated 04.01.2025
2. Your email dated 20.01.25 & 27.01.25

Dear Sir/Madam,

I am directed to inform you that after evaluating the bid documents submitted by you as referred above, the Director, CSIR-Indian Institute of Chemical Biology is pleased to inform you that you have been selected as the successful bidder for the supply, installation and commissioning of Walk In Plant Growth Chamber. Accordingly, you are requested to arrange for Supply, Installation & commissioning of the offered item/items as detailed below:

Sl. No.	Estimate Description	QTY	UNIT PRICE [ INR ]	TOTAL PRICE [ INR ]
1	<b>SET7THL-TP Walk-in Plant Growth Chamber</b> <b>As per Annexure A attached</b>	01	2030000.00	2030000.00
Detailed specifications of the items shall strictly conform to those specified in Purchaser's Tender Document No. IICB/PUR/24-25/599/623/369RT [published on CPP portal of Government of India with tender ID 2024_CSIR_219864_1] and complied by Supplier in their quotation/offer SET/24-25/PGC/IICB, dated 04.01.2025 and email dated 20.01.25, 27.01.25.				
			Grand Total	Rs.2030000.00
			Add : GST @ 18%	Rs. 365400.00
			F.O.R. CSIR-IICB Kolkata Price	Rs. 2395400.00
<i>Rupees Twenty Three Lakh Ninety Five Thousand and Four Hundred only</i>				

The Purchase Order shall be governed by the terms and conditions as stipulated in CSIR-IICB Tender Document. The technical specifications and other allied features of the ordered goods and services shall strictly conform to those specified in the CSIR-IICB Tender Document.

Attention of the Supplier is also invited to the following conditions:

1	Price basis	F.O.R. CSIR-IICB Kolkata
2	Delivery period	The entire obligations of supply, installation and commissioning of the ordered goods shall have to be completed within 60 days from the placement of P.O. Purchaser reserves the right to ask for a joint inspection of the delivered goods in the presence of supplier's representative.
3	Delivery site	CSIR-IICB, Jadavpur, Kolkata 700032
4	Taxes & Duties	IGST @18% shall be applicable on the order value.
5	Installation and Commissioning and Training	The ordered goods shall be installed and commissioned by Supplier's engineers within the delivery period stipulated in this Purchase Order. At the time of Installation and commissioning 02 days

		Charge free training to be provided to two operators on site.
6	Warranty	The ordered goods shall be covered under on-site comprehensive warranty for a period of 18 months to be effective from the date of successful installation and commissioning of the goods. Other aspects of the warranty clause are detailed at GCC Clause 2.21 read with the relevant SCC.
7	Payment terms	The payment shall be made in Indian Rupees as follows: <ul style="list-style-type: none"> <li>100 percent (Hundred Percent) of the Contract Price shall be paid within 30 days of completion of delivery and acceptance of the materials to the complete satisfaction of the user division against submission of the documents specified in the Purchase Order and Performance Security</li> </ul> <b>Note: All payments due under the Contract shall be paid after deduction of statutory levies at source (like ESIC, Income Tax, etc) wherever applicable.</b>
8	Performance Bank Guarantee / Performance Security	Within 21 days of issue of this Purchase Order, Supplier shall furnish a Performance Security for 05 % of the order value / invoice value. Other aspects of the Performance Security clause are detailed at GCC Clause 2.13 read with the relevant SCC.
9	Liquidated damage	Subject to GCC Clause on Force Majeure, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as penalty, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services or contract value in case the delivered price of the delayed Goods or unperformed services cannot be ascertained from the contract, for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the Percentage specified in SCC. Once the maximum is reached, the Purchaser may consider termination of the Contract pursuant to GCC Clause on Termination for Default. <p><b>The penalty shall be 0.5% per week or part of a week towards late delivery and towards delay in installation and commissioning.</b></p> <p><b>The maximum amount of penalty shall be 10%</b></p>

You are requested to send us the Order Acknowledgement immediately and in any case within 07 days of receipt of this Purchase Order.

This Purchase Order constitutes a binding contract between you as the Supplier and CSIR-Indian Institute of Chemical Biology as the Purchaser.

Yours faithfully,

Controller of Stores & Purchase  
For and on behalf of the Council of Scientific & Industrial Research

Copy to:

- i. Dr. Smrutisanjita Behera, Indenting Officer

## Annexure-A

### Technical specification of SET7THL-TP Walk-in Plant Growth Chamber

#### **1 Key Technical Specifications:**

##### **1.1 Climate simulation specifications:**

- 1.1.1 Interior dimension: 9.4'Wx6.4'Dx7.8'H
- 1.1.2 Exterior dimension: 10.0'Wx7.0'Dx8.0'H
- 1.1.3 Plant Growth area: 6'Wx5'D (30Sq.ft)
- 1.1.4 Total clearance growth height from the floor: 6.0 feet
- 1.1.5 Temperature range: 18° - 40°
- 1.1.6 Relative humidity range between 25°~40°: up to 90% RH
- 1.1.7 Temperature uniformity:  $\leq 1^\circ$
- 1.1.8 Humidity uniformity:  $\pm 5\%RH$

#### **2 Cabinet Structural Features:**

- 2.1 Exterior shell materials of SET7THL-TP: Pre painted plate
- 2.2 Interior shell materials for SET7THL-TP: Pre painted plate
- 2.3 Interior Floor for SET7THL-TP: Customer provided concrete floor
- 2.4 Heat insulation materials: Hard Poly Urethane foamed plastic of 4" thickness
- 2.5 Single wing door with inner viewing thermal-pane window facility, movable light cover lock and key and fitted with sweeping gasket.

#### **3 Air-conditioning System:**

- 3.1 Regulation and control: Air discharge from bottom of side wall and recirculation from the top of side wall
- 3.2 The conditioning system contains all necessary fans, heaters and valves
- 3.3 Heating: Stainless steel sheathed heater (surface evaporating system)
- 3.4 Humidifier: Fogger Humidification system with necessary water reservoir assembly

#### **4 Lighting System:**

- 4.1 Light intensity over growth area is 600 Micromoles measurable with light sensor at 6' from the light canopy.
- 4.2 One light canopy of size 6 feet X 5 feet with Valoya led lights six BX series fixtures fixed to ceiling.
- 4.3 LED lights will be of brand Valoya
- 4.4 Valoya led lights model BX series spectrum for research of all growth stages of plant. The Valoya lights are globally proven and used by many of the world's largest universities, research institutes and agricultural companies.

- 4.5 Light level is dimmable from 0% to 100 % in increments of 5% through the program from controller. The dimming of lights should be programmable thru the controller.
- 4.6 Programming (Light/Dark) control for the Lamps should be controlled thru the controller

## 5 Cooling System:

- 5.1 Single Scroll Compressor system for maintaining the temperature in chamber
- 5.2 Hot gas bypass system control is provided for precise climatic control
- 5.3 Condensing unit is charged with CFC free refrigerant
- 5.4 Refrigeration function monitored by controller including visual and audible alarm.

## 6 Control system:

- 6.1 The Schneider controller is 7 inch touch screen color controller.
- 6.2 The controller is having 16 programmable programs and each program have 12 timelines. The temperature, relative humidity, and the lights can be independently programmable through the controller.
  - 6.2.1 . Temperature sensor: We are providing two temperature sensors, The reading displayed will be average of two sensors (which is more uniform and reliable)
  - 6.2.2 Humidity sensor: Electronic capacitive humidity sensor.
  - 6.2.3 Light sensor: Electronic light sensor
  - 6.2.4 Programmable PLC and Touch Screen controller
  - 6.2.5 Resolution: Temperature: 0.1°, Humidity: 1%RH
  - 6.2.6 Set range: Temperature: 18°~40°; Humidity: up to 90%RH
  - 6.2.7 Audible alarms are included based on user defined limits
- 6.3 **Sampling sensor:** Vertically adjustable sensing device located in the growth area directs a continuous sample of chamber air for accurate controlling and recording, unaffected by lamp radiation

## 7 Security protection system:

- 7.1 Over-temperature protection
- 7.2 Overload protection of motor
- 7.3 Compressor over temperature & pressure protection
- 7.4 Over load relay for over current protection
- 7.5 Programmable Delay Relay
- 7.6 Fuse for control and lighting circuit
- 7.7 Flange Mount Disconnect for Power
- 7.8 Humidity water shortage protection

## 8 Equipment working condition:

**8.1 Ambient Environment:**

8.1.1 Ambient temperature: 20°~35°, Relative humidity: ≤75%RH

**8.2 Power supply requirement:**

8.2.1 Power voltage: AC440±10%V 50Hz, 3-phase + ground wire protection;

8.2.2 Power switch: Air switch (knife-switch not allowed) Max. Current 32A.

**8.3 Water requirement for Humidity:**

8.3.1 Water flux:5l/h, Water pressure: 0.5-2bar

**9 After-sale service:**

We have our team of trained engineers to render you efficient and effective after sales service. During the warranty, routine free service shall be extended. Post warranty, you are advised to enter into an Annual Service/maintenance contract with us for proper upkeep of the equipment.

**10 Technical training:** Provide Charge-free training to operator (in user site after installation and commissioning of the equipment).**11 Accessories:**

11.1 Warranty Certificate: one copy

11.2 Operation Manual: one copy

11.3 Maintenance Manual: one copy

11.4 Circuit diagram: one copy