

**HLL Biotech Limited**  
**(A Government of India Enterprise)**  
**(A Subsidiary of HLL Lifecare Limited)**  
**Corporate identity number of HBL: U24290KL2012GOI030732 dtd 12.3.12**

**BID REF No: HBL/RD/HVAC/014/13-14 dated 03.01.2014**

## **TENDER FOR MODIFICATION WORK IN HVAC**

### **INTRODUCTION OF THE COMPANY**

HLL Biotech Limited (HBL) was incorporated as a subsidiary of HLL Lifecare Ltd, a Government of India Enterprise under the Ministry of Health and Family Welfare, Government of India. HBL is conceived to take the lead role in providing products, services and assistance in achieving our country's goals in immunization and eradication of deadly diseases.

HBL is setting up an Integrated Vaccine Complex (IVC) at Chengalpet, an emerging industrial hub in the southern tip of Tamilnadu state. Project outlay for IVC is Rs 6.00 Billion and 75% of the products & services will be designed to meet the targets of the Universal Immunization Policy (UIP) of the country.

This project has been declared as a "Project of National Importance" by the Government of India.

### **SCOPE OF WORK**

The scope of work should be the supply, installation and Commissioning of HVAC system as mentioned in the Schedule of Requirements and complying with the enclosed Technical Specification. Supplier may quote for the items against the technical specification.

The installation and Commissioning has to be done by the supplier at HBL Lab Module – 109, TICEL Bio Park Campus, Taramani, Chennai.

## 1. Instruction to Bidders

- 1.1 The bids are invited on Single stage bidding process basis. The bid will constitute of both Technical bid and Financial bid in a single cover. Technical bid cover along with EMD cover & Financial bid cover should be kept in a single cover superscribing with tender reference number
- 1.2 The bid is invited for supply, installation and Commissioning of HVAC system at HBL Lab Module-109, TICEL Bio Park Campus, Taramani, Chennai as per specification and other details given in the bid document. All bidders who qualify the eligibility conditions as detailed in the bid document are eligible to participate except in the case of firms who are blacklisted / barred by competent agencies or HBL in participation and award of such contracts.
- 1.3 Bidders can send their queries and clarifications to address given in clause 1.4, up to three days prior to the due date of bid submission. There is no bid document fee.
- 1.4 Bids shall be addressed in the name of The **Chief Executive Officer, HLL Biotech Limited, TICEL Bio-park Campus (Module no. 013-015), CSIR Road, Taramani, Chennai- 600 113 Contact No: 044 22544949/56.** Email: [eas@lifecarehll.com](mailto:eas@lifecarehll.com). Due date of submission of the bid will be on **17th Jan 2014 up to 15:00 Hrs.** The bid will be opened on the same day at **15:30 hrs.**
- 1.5 Bids shall be valid for 90 days from the date of opening.
- 1.6 The bids should contain complete technical specification of the equipment along with detailed illustrations and diagrams to facilitate evaluation.

## 2. **Mode of submission of Bids**

Documents to prove the eligibility criteria should be submitted. The bid should consist of the following:

- a. **EMD (Earnest Money Deposit) in the form of crossed demand draft/ banker's cheque** in favor of "HLL Biotech Limited" payable at Chennai, has to be submitted for **Rs. 14,000/- (Rupees Fourteen Thousand only)** which shall be valid for 90 days from the date of tender opening.
- b. Bid document bearing signature and seal of the bidder in all pages
- c. **Annexure: I** (Technical specification, technical brochures/datasheets/drawings/Model no)
- d. **Annexure : II** ( Bid Data sheet)
- e. **Annexure: III** (Past experience, including performance certificate from clients).
- f. **Annexure IV:** Bid form
- g. **Annexure V-A & B:** Financial bid in the prescribed format given in the bid document.

All other supporting documents (mentioned in clause 3) and certificates substantiating the bidder's eligibility shall be attached.

- 2.1 The bids shall be enclosed in a sealed envelope super scribing "**Tender for** supply, installation and Commissioning of HVAC system, **tender ref no. HBL/RD/HVAC/014/13-14 dated 03.01.2014**" and shall be addressed to

**The Chief Executive Officer,  
HLL Biotech Limited,  
TICEL Biopark Campus (Module no. 013-015),  
CSIR Road, Taramani, Chennai- 600 113  
Contact No: 044 22544949/68/72, Fax: 044 22540101.**

- 2.2 Any bid received after the stipulated time period shall be considered as late tender and will be rejected.

### 3. Minimum Eligibility Criteria

- a. Net worth of the company shall be positive during the last two financial years. **The balance sheet , profit and loss account for last two financial years (FY2011-12, FY 2012-13) certified by a Chartered Accountant shall be submitted.**
- b. The bidder in general should possess adequate experience in number of years and volume of similar supply, installation and Commissioning of HVAC system done in the past. The bidder shall have done similar work in last 2 years. Purchase orders and successful completion certificates from previous clients shall be submitted.

### 4. Country of Origin

- 4.1 All goods and services to be supplied and provided for the contract shall have the origin in India or in the countries with which the Government of India has trade relations.
- 4.2 The word “origin” incorporated in this clause means the place from where the goods are manufactured, produced or processed or from where the services are arranged.
- 4.3 The country of origin may be specified in the Price Schedule wherever required.

### 5. Bid Evaluation

Bid determined to be substantially responsive will be checked by HBL for any arithmetic errors and the same will be corrected as follows:

- a. Where there is a discrepancy between the rates in figures and in words, the rates in words will prevail.
- b. Where there is a discrepancy between the unit price and the total price resulting from the multiplying the unit price by the quantity, the unit price as quoted shall prevail.

- c. The tenderer supplying indigenous goods or already imported goods shall quote only in Indian Rupees.

For imported goods if supplied directly from abroad, prices shall be quoted in any freely convertible currencies say US Dollar, Euro, GBP or Yen. As regards price(s) for allied services, if any required with the goods, the same shall be quoted in Indian Rupees only if such services are to be performed /undertaken in India. Commission for Indian Agent, if any and if payable shall be indicated in the space provided for in the price schedule and will be payable in Indian Rupees only. Such conversion of currencies will be done based on rate of exchange declared by the RBI as on the date of 'Price Bid' opening .Tenders, where prices are quoted in any other way shall be treated as non -responsive and rejected.

## 6. Tender Price & Documents

For domestic goods or goods of foreign origin located within India, the prices in the corresponding price schedule shall be entered separately in the following manner:

- a) The price of the goods should be quoted on FOR HBL Site basis with the detailed breakup of ex-factory/ ex-showroom/ ex-warehouse/ off-the-shelf, as applicable, including all taxes and duties like sales tax, CST/VAT, CENVAT, Custom Duty, Excise Duty etc. already paid or payable on the components and raw material used in the manufacture or assembly of the goods quoted ex-factory etc. or on the previously imported goods of foreign origin quoted ex-showroom etc;
- b) Any sales or other taxes and any duties including excise duty, which will be payable on the goods in India, if the contract is awarded.
- c) Charges towards Packing & Forwarding, Inland Transportation, Insurance (local transportation and storage) would be borne by the Supplier from ware house to the consignee site for a period including 3 months beyond

date of delivery, Loading/Unloading and other local costs incidental to delivery of the goods to their final destination as specified in the List of Requirements and Price Schedule.

For goods offered from abroad, the prices in the corresponding price schedule shall be entered separately in the following manner:

- a) The price of goods quoted should be on DDP basis at consignee site in India as indicated in the List of Requirements, Price Schedule.
- b) The charges for Insurance (local transportation and storage) would be extended and borne by the Supplier from warehouse to the consignee site for a period including 3 months beyond date of delivery.

In case, the Tender document permits the tenderers to quote their prices in different currencies, all such quoted prices of the responsive tenderers will be converted to a single currency viz., Indian Rupees for the purpose of equitable comparison and evaluation, as per the exchange rates established by the Reserve Bank of India for similar transactions, as on the date of 'Price bid' opening. DDP price/FOR HBL site price will be considered for comparison and evaluation.

### **Distribution of Dispatch Documents for Clearance/Receipt of Goods**

The supplier shall send all the relevant despatch documents well in time to the Purchaser/Consignee, to enable the Purchaser/Consignee clear or receive (as the case may be) the goods in terms of the contract.

The usual documents involved and the drill to be followed in general for this purpose are as follows.

- A) For Domestic Goods, including goods already imported by the supplier under its own arrangement**

Within 24 hours of despatch, the supplier shall notify the purchaser/consignee, and others concerned if mentioned in the contract, the complete details of despatch and also supply the following documents to be submitted as per the instruction of purchaser:

- I. Four copies of supplier's invoice showing contract number, goods description, quantity, unit price and total amount.
- II. Two copies of packing list identifying contents of each package.
- III. Inspection certificate issued by the nominated Inspection agency, if any.
- IV. Certificate of origin.
- V. Insurance Certificate
- VI. Manufacturer/Supplier's warranty certificate & In-house inspection certificate.

**B) For goods imported from abroad**

Within 24 hours of despatch, the supplier shall notify the purchaser and others concerned if mentioned in the contract, the complete details of despatch and also supply the following documents to them by registered post / speed post (or as instructed in the contract).

- I. Four copies of supplier's invoice showing contract number, goods description, quantity, unit price and total amount;
- II. Original and four copies of the negotiable clean, on-board Bill of Lading/Airway bill, marked freight pre paid and four copies of non-negotiable Bill of Lading/Airway bill;
- III. Four Copies of packing list identifying contents of each package;
- IV. Insurance Certificate
- V. Manufacturer's/Supplier's warranty certificate;
- VI. Certificate of origin

VII. Port of Loading

VIII. Port of Discharge and Expected date of arrival.

**7. Exemptions/Forms**

HBL will not be giving any duty exemption. **HBL will issue the “C” form.**

**8. Rejection of bids**

Notwithstanding the above conditions, HBL reserves the right to accept or reject any offer, and to annul the tender process and reject all offers, at any time prior to award of Contract without thereby incurring any liability to the affected Bidder or Bidders or any obligations to inform the affected Bidder or Bidders of the grounds for HBL’s action.

**9. Notification of Award**

9.1 Prior to the expiry of the period of offer validity prescribed by HBL, HBL will notify the successful Bidder by Tele-fax or e-mail, to be confirmed in writing by registered post/ by courier, that his offer has been accepted. The purchase order will be issued to the successful bidder. No correspondence will be entertained by HBL from the unsuccessful Bidders.

9.2 Upon selection of the successful bidder (technically qualified L1 party) HBL will promptly notify the same to successful Bidder through an LOI/Purchase Order.

9.3 EMD’s of unsuccessful bidders will be returned only after finalizing the L1 Party.



## **TERMS AND CONDITIONS**

### **1. DEFINITION:**

1.1 For the purpose of this contract, the following words and expressions shall have the meaning hereby assigned to them except where the context otherwise requires:-

- i. "HBL" means HLL Biotech Limited, which expression shall unless excluded by or repugnant to the context include HBL's representative.
- ii. "Contractor/ Bidder" Means successful lowest bidder.
- iii. "Earnest Money Deposit" (EMD) means Bid Security/ monetary or financial guarantee to be furnished by a tenderer along with its tender.
- iv. "Performance Security" means monetary or financial guarantee to be furnished by the successful tenderer for due performance of the contract placed on it. Performance Security is also known as Security Deposit.
- v. "Consignee" means the organization/person to whom the goods are required to be delivered as specified in the Contract. If the goods are required to be delivered to a person as an interim consignee for the purpose of dispatch to another person as provided in the Contract then that "another" person is the consignee, also known as ultimate consignee.

### **2. PAYMENT SCHEDULE:**

Payment shall be made as specified in the contract in the following manner:

Advance against Bank guarantee equivalent to 110% of the advance amount and submission of 10 % of the contract value as Security Deposit/ Performance Security in the form of Bank of Bank Guarantee from any scheduled commercial bank	20% of the order value
On supply of material at the desired location	50% of the order value

After successful installation, commissioning & Final Acceptance by HBL's Representative	30% of the order value
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No other charges apart from the order value will be paid by HBL. The quoted price should be also inclusive of Insurance & FOR delivery at consignee site and is firm and fixed till completion of the work.

### 3. TAXES AND OTHER LEVIES

The quoted price shall be inclusive of all applicable taxes and duties.

### 4. PERFORMANCE SECURITY

4.1 The successful bidder has to furnish performance guarantee from nationalized / scheduled bank in the form of a bank guarantee in the name of HLL Biotech Limited on receipt of the purchase order. The performance bank guarantee valid up to a period of 1 year (completion of warranty) beyond the completion of work with additional claim period of 2 months for 10% of total contract value has to be submitted within 10 days from the date of Purchase Order. The EMD Paid shall be returned after receipt of Performance Bank Guarantee.

4.2 Failure of the successful Bidder to furnish the required Performance Security shall constitute sufficient grounds for the annulment of the award of Contract and EMD shall be forfeited.

#### 4.3 Forfeiture of Performance Security

In case, the Contractor/ Bidder fails to complete the work, HBL, without prejudice to rights and remedies available under the contract, shall forfeit and en-cash the Performance Guarantee.

4.4 In case, the bank goes in liquidation or for any reason is unable to make payment against the said Bank Guarantee, the loss caused thereby shall be borne by the Contractor/ Bidder. The Contractor/ Bidder forthwith, on demand from HBL, shall make good the deficit.

## 5. ADDITIONS/DELETIONS

- 5.1 HBL shall have the right to direct in writing for changes, additions, modifications or deletions in the design and drawings or any part of the work and to request in writing additional work in connection therewith and the Contractor/ Bidder shall comply with such directions.
- 5.2 The Contractor/ Bidder shall not make any deviations, alterations, additions or omissions from the work shown/described and awarded to the Contractor/ Bidder except through and with proper approval of HBL.

## 6. TIME SCHEDULE

- 6.1. The day of commencement of project will be reckoned from the date of issue of Work order.
- 6.2 The work shall be completed at site within 8 weeks from the date of issue of work order.
- 6.3 The final acceptance certificate shall be issued on completion of the entire scope of work by the vendor.
- 6.3 The supply, installation and commissioning shall be carried out with all due diligence and as per the time schedule specified above. In case of any delay/default, of the Contractor/ Bidder to adhere to the agreed time schedule. HBL shall recover the liquidated damages from the Contractor/ Bidder at the rate of 1% (One percent) of the total amount of fee per week of delay of any activity subject to a maximum of 5% (Five percent) of the total order value. However if there is a purposeful delay by the Contractor/ Bidder, HBL reserves all rights to terminate the contract and get the full work executed at his risk and cost.

## 7. EXTENSION OF TIME

- 7.1 To adhere to the above mentioned time schedule, the Contractor/ Bidder shall provide on demand necessary documents, information and

certificates/undertakings to HBL. Any delay in supplying the requisite documents and delay due to any other cause beyond the control of the Contractor/ Bidder shall be considered for grant of extension of time. If the Contractor/ Bidder require extension of time, they shall intimate in writing to HBL within 3 days of the occurrence of such hindrance/delay, along with proper documents.

- 7.2 HBL after satisfying itself about the reasonableness of grounds may grant extension of time, if it is justified and communicated the same in writing. Whenever such extension of time is granted, it would be without prejudice to the rights of HBL for any penal action to the extent of the delay attributable to the Contractor/ Bidder. Any extension of time granted as stated above shall neither entitle the Contractor/ Bidder to any claim for increase in their fees nor shall it release him from any of the obligations under the said agreement.

## **8. ABANDONMENT OF WORK**

- 8.1 If the Contractor/ Bidder/ supplier abandons the work for any reason whatsoever or becomes incapacitated as aforesaid, HBL shall forfeit/en-cash the Performance Guarantee. HBL shall be at liberty to make full use of all or any of material supplied by the Contractor/ Bidder/ supplier. The Contractor/ Bidder/ supplier shall also be liable to refund all the charges paid to him up to date plus such damages as may be assessed by HBL including the recovery of liquidated damages.
- 8.2 Provided, however, that in the event of the termination of the agreement under proper notice as provided in the clause hereinafter, the Contractor/ Bidder shall be liable to refund any excess payment made to him over and above which is due to him in accordance with the terms of this agreement, for the work executed by him till the date of termination of agreement.

## **9. WARRANTY**

9.1 The bidder shall give warranty for a period of minimum one year from the date of final acceptance certificate from HBL. HBL shall grant right of access to the Contractor/ Bidder, of this portion of the work claimed to be defective for inspection and rectification.

9.2 HBL may recover the loss from the dues of the Contractor/ Bidder in case of failure to comply with the above clause.

## **10. DETERMINATION AND RESCISSION OF TERMS & CONDITIONS**

10.1. When the Contractor/ Bidder have made himself liable for action under any of the clauses aforesaid, HBL shall have powers:

- a) To rescind the agreement.
- b) To engage another Contractor/ Bidder to carry out the balance work debiting the Contractor/ Bidder the extra amount, if any, so spent for getting the balance work done. This amount would be in addition to the recovery of liquidated damages.

## **11. GENERAL**

11.1 The Contractor/Bidder shall be fully responsible for the technical soundness of the material and also ensure that the material is supplied as per the specifications.

11.2 The Contractor/ Bidder hereby agrees that the charges to be paid as provided herein (clause 3) will be in full discharge of functions to be performed by him and no claim whatsoever shall be made against HBL in respect of any proprietary rights or copy right on the part of any other party relating to plans, models and drawings.

11.3 The Contractor/ Bidder shall indemnify and keep indemnified HLL Biotech Ltd., against any such claims and all costs and expenses paid by HBL in defending such claims to be borne by the Contractor/ Bidder.

11.4 The Contractor/ Bidder hereby agrees that HBL shall have the right to take out any of the activities, which in the opinion of HBL is not being performed by the Contractor/ Bidder with due diligence, and within the agreed time schedule, and which can be performed independently. The fees or the expenses incurred shall be debited to the Contractor/ Bidder.

## **12. ARBITRATION**

12.1 All disputes or differences whatsoever arising between the parties out of or relating to the Contractor/ Bidder services, meaning and operations or effect of this contract or the breach thereof shall be settled by arbitration. Matters to be arbitrated upon shall be referred to a sole Arbitrator, to be appointed by HBL and the award made in pursuance thereof shall be binding on the parties. Such arbitration shall be governed by the Indian Arbitration and Conciliation Act 1996.

12.2 The place of arbitration shall be at Chennai.

## **13. FALL CLAUSE**

The prices charged for this particular service/supply under the Contract by the supplier/service provider shall in no event exceed the lowest price at which the supplier/service provider sells the service/supply of identical description to any person(s)/organization(s) including the Purchaser or any Department of the Central Government or any Department of a State Government or any statutory undertaking of the Central or a State Government, as the case may be, during the period till performance of all Supply Orders placed during the currency of Rate Contract is completed.

**ANNEXURE- I**

**BID REF No: HBL/RD/HVAC/014/13-14 dated 03.01.2014**

**TECHNICAL SPECIFICATION**

**ROOM DATA SHEET :**

ROOM DATA SHEET													
Room No	Description	Size mtr			Area	Area	volume	Air Quality	Inside Condition		Person Occupancy	EQPT Load	ACPH
		L	B	H	sq.mtr.	sq.ft.	cu.ft.	(Class)	Temp °C	RH %		HP	
	<b>AHU-1</b>												
1	CHANGE RM -01	2.01	1.92	2.4	3.86	41.5	327	NA	25 NMT	60	5	5.00	2
2	CHANGE RM -02	3.01	1.31	2.4	3.94	42.4	334		25 NMT	60			
3	CHANGE RM -03	3.02	1.92	2.4	5.80	62.4	491		25 NMT	60			
4	LAB-01	4.05	1.92	2.4	7.78	83.7	659		25 NMT	60			
5	LAB-02	3.04	3.23	2.4	9.82	105.7	832		25 NMT	60			
					<b>31.20</b>	<b>335.7</b>	<b>2642</b>						

Drawing is attached as Annexure – VI Typical HVAC Schematic

## ANNEXURE- II

### Bid data Sheet

S.no	Description	Details
1	Bid reference number	<b>HBL/RD/HVAC/014/13-14 dated 03.01.2014</b>
2	Due date for submission	17th Jan 2014, 15:00 Hrs
3	Name & Address of bidder	
5	Year of establishment	
6	Type of the firm	Public Ltd/Pvt Ltd./Partnership/Regd firm
8	Name & Address of Directors/Partners	1. 2. 3.
7	PAN Number	
8	Contact Phone-Office	
9	Cell	
10	Email	
11	Copy of MOA/partnership deed/Registration	Attached/Not Attached
12	Copy of PAN of Directors/Partners	Attached/Not Attached
13	Latest IT return statement	Attached/Not Attached
14	Past three years P&L, Balance Sheet	Attached/Not Attached
15	All pages of bid document duly sealed and signed by the authorized person	Attached/Not Attached
16	Power of Attorney/Authorization to sign the bid	Attached/not Attached
17	Manufacturer authorization letter	Attached/not Attached
18	EMD (in favor of HLL Biotech Limited in the form of Demand Draft / Banker's cheque from a Nationalized or Scheduled bank, payable at Chennai)	Attached/Not Attached



### ANNEXURE- III

**Number of projects for which HVAC System (As per Annexure-I-Technical specification) were supplied, installed & Commissioned in the last TWO years**

Sl. No.	Name and location of the Project	Name and address of the Client	Project Details		Completion Date
			Details of the items supplied	Project Value Rs Lakhs	
1					
2					
3					
4					
5					
6					

**Satisfactory completion certificate from the client to be attached.**

## ANNEXURE- IV

**BID REF No: HBL/RD/HVAC/014/13-14 dated 03.01.2014**

### BID FORM

Having examined the bidding documents, including amendments of which is hereby acknowledged, we, the undersigned, offer to execute the contract including the supply and delivery of the goods (FOR HBL Site or DDP HBL Site) in full conformity with the said bidding documents for the sum of:

**In Fig:  
IN WORDS**

(Hereinafter called "the Total Bid Price") or such other sums as may be determined in accordance with the terms and conditions of the Contract. The above amounts are in accordance with the Price Schedules attached herewith and are made part of this bid.

We undertake, if our bid is accepted, to execute the contract in accordance with the delivery schedule specified in the schedule of requirements.

If our bid is accepted, we undertake to provide a performance security in the form, in the amounts, and within the times specified in the Bidding Documents.

We agree to abide by this bid, for the Bid Validity Period specified in the Bid Data Sheet and it shall remain binding upon us and may be accepted by you at any time before the expiration of that period.

Until the formal final Contract is prepared and executed between us, this bid, together with your written acceptance of the bid and your notification of award, shall constitute a binding Contract between us. We understand that you are not bound to accept the lowest or any bid you may receive.

Dated:

Signed by:

In the capacity of

**ANNEXURE V**  
**PRICE SCHEDULE**

Bill of Quantity for HVAC Work at Module 109							
S.No.	ITEM DESCRIPTION	QTY	UNIT	SUPPLY		INSTALLATION	
				RATE	AMOUNT	RATE	AMOUNT
1.0	<b>Double Skin Air Handling Unit FOR UNCLASSIFIED AREA</b>						
	Supply of minmum 40 mm thk Puf Double Skin Air handling Unit (AHU) comprising of mixing box with mixing chamber, Fresh air Module ( with Gl. bird screen ,volume control damper and 20 Micron Filter(90 % Efficiency), prefilter section (10 micron , 90% efficiency), Chilled Water Cooling with Coil section with 4 Rows deep cooling coil with copper tubes and aluminium fins, , insulated SS drain tray with pipe connection,fan section with DIDW Forwardd curved centrifugal fan belt driven by suitable non flame proof TEFC squirrel cage induction motor and complete with anti vibration mounts, Double skin rexin flexible connection for fan outlet. (Blower Make: Nicotra / Kruger), (Filter Make: Thermadyne/AAF/Freudenberg)						
1.1	AHU -01	1	NO				
	FLOW -1800 CFM						
	ST. PR - 40 MM						
	MOTOR - 1.0 HP (Make: Crompton/ABB)						
	CAPACITY - 5.5TR						
2.0	<b>Air distribution system</b>						
	<b>DUCTING, DAMPER, GRILLE &amp; DIFFUSER</b>						

**Bill of Quantity for HVAC Work at Module 109**

Bill of Quantity for HVAC Work at Module 109							
				SUPPLY		INSTALLATION	
S.No.	ITEM DESCRIPTION	QTY	UNIT	RATE	AMOUNT	RATE	AMOUNT
	Sheet Metal work comprising of G.S.S. ducting complete with all supports and as per the specification with MS angle frame, bolts, nuts neoprene gaskets and sealed with RTV silicon sealant, sizes & quantities are as under:						
2.1	24 G (Make: JINDAL /SAIL/ TATA)	1000	sq. ft				
2.2	16G GI opposed balde type volume control damper for supply and Exhaust air duct.	5	sq. ft				
2.3	Aluminium powder coated supply air diffuser with G.I. volume control damper. ( 4 Way Diffuser)	10	sq. ft				
2.4	Aluminium powder coated return air diffuser with G.I volume control damper.( 4 Way Diffuser)	10	sq. ft				
2.5	Fusible Link Fire Damper in supply & return duct with limit switch to trip the AHU	5	Sq.ft				
3.0	<b>DUCT INSULATION</b>						
3.1	Duct insulation with 13 mm Thick Nitrile Rubber insulation for Supply Air ducts (Make: Armaflex/ Kflex )	500	sq. ft				
3.2	Dismantling of Existing installed GI Duct	500	sq. ft				
4.0	<b>CEILING PANEL DISMANTLING WORK</b>						
4.1	Dismantling of 50 mm thick ceiling Panel and Refixing the ceiling panel with RTV silicone sealant to make it air tight.	350	sq. ft				
5.0	<b>STARTER PANEL</b>						

**Bill of Quantity for HVAC Work at Module 109**

				SUPPLY		INSTALLATION	
S.No.	ITEM DESCRIPTION	QTY	UNIT	RATE	AMOUNT	RATE	AMOUNT
5.1	Supply & Installation of Electrical starter panels for Air Handling Units Consists of starter, MCB Contactor and Overload Relay On /OFF Push button for AHU,Toggle swith forOn/Off for Heaters Voltmeter and Ammeter (Supply) (Electrical Component Make : L&T/Seimens)	1	No				
6.0	<b>CHWS PIPING &amp; ACCESSORIES FOR AHU MANIFOLD</b>						
6.1	Chilled Water Piping in MS class 'C' construction of size 32 mm complete with fittings,Bends, elbows, union and support hangers, sleeves, Ball valves,Y strainer, balancing valve, 2Way Modulating globe Value,Purge and Drain value etc. with 25 mm thick nitrie rubber insulation and PVC drain pipe to connected to the nearest drain point. ( 2Way Modulating valve Make: Honeywell/Seimens/Bellimo )(Pipe Make: TATA/Jindal)(insulation Make: Armaflex/ Kflex ) (Note: Maximum MS pipe length will be 10 m) Thermostat set point & Display of temp. & RH shall be adjusted from Room/Electrical Panel.	1	No				
7.0	<b>Power and control Cabling::</b>						
	PVC sheathed Armoured Copper power cabling between HVAC equipment, controls, controllers, HVAC panel boards (Make: Polycab/CCI/Universal)						
7.1	3C x 2.5 sqmm Cu. (for AHUs )	20	Rnmts				
7.2	4C x 2.5 sqmm Cu. (for AHUs )	10	Rnmts				
8.0	<b>Control cabling</b>						

**Bill of Quantity for HVAC Work at Module 109**

Bill of Quantity for HVAC Work at Module 109							
				SUPPLY		INSTALLATION	
S.No.	ITEM DESCRIPTION	QTY	UNIT	RATE	AMOUNT	RATE	AMOUNT
8.1	4C x 1.5 sqmm Cu. ( Limit switch,Two way modulating value )	50	Rnmts				
9.0	<b>Earthing:</b>						
9.1	10 G Copper Earthing for HVAC equipment & controls	40	Rnmts				
10.0	<b>Double Skin Exhaust Unit FOR UNCLASSIFIED AREA</b>						
	Supply of 25 mm thk Puf Double Skin Exhaust Unit (EXU) comprising of volume control damper and 10 Micron Filter section and having Prefilter(10 micron , 90% efficiency), fan section with DIDW Forward/Backward curved centrifugal fan belt driven by suitable non flame proof TEFC squirrel cage induction motor and complete with anti vibration mounts, Double skin rexin flexible connection for fan outlet. and Fan outlet having Hepa filter section with 0.3 Micron Hepa filter (H-13) Make: (Freudenberg/AAF/Thermadyne) Note: HEPA Filter Integrity Test to be Conducted at site.						
10.1	EXU -01	1	NO				
	FLOW -250 CFM						
	ST. PR - 60 MM						
	MOTOR - 0.25 HP (Make: Crompton/ABB)						
11.0	<b>ELECTRICAL STRIP HEATERS</b>						
	<b>Electrical Heaters</b>						
11.1	SS 304 Electrical Strip heater 3.0 KW ( 1.0 kw X 3 No's)	1	NO				
	<b>Total Basic Amount</b>						

Bill of Quantity for HVAC Work at Module 109							
				SUPPLY		INSTALLATION	
S.No.	ITEM DESCRIPTION	QTY	UNIT	RATE	AMOUNT	RATE	AMOUNT
	CST WILL BE @ 2% AGAINST FORM ' C '						
	SERVICE TAX WILL BE CHARGED EXTRA @ 12.36 % ON INSTALLATION						
	TOTAL						
	<b>Total Amount (Supply &amp; Installation)</b>						

NB: Unit price shall be written in figures and words

Total Tender price in Rupees: \_\_\_\_\_

**IN WORDS:** \_\_\_\_\_

NOTE: -IF THERE IS A DISCREPANCY BETWEEN THE UNIT PRICE AND TOTAL PRICE, THEN THE UNIT PRICE SHALL PREVAIL.

Name \_\_\_\_\_

Business Address \_\_\_\_\_

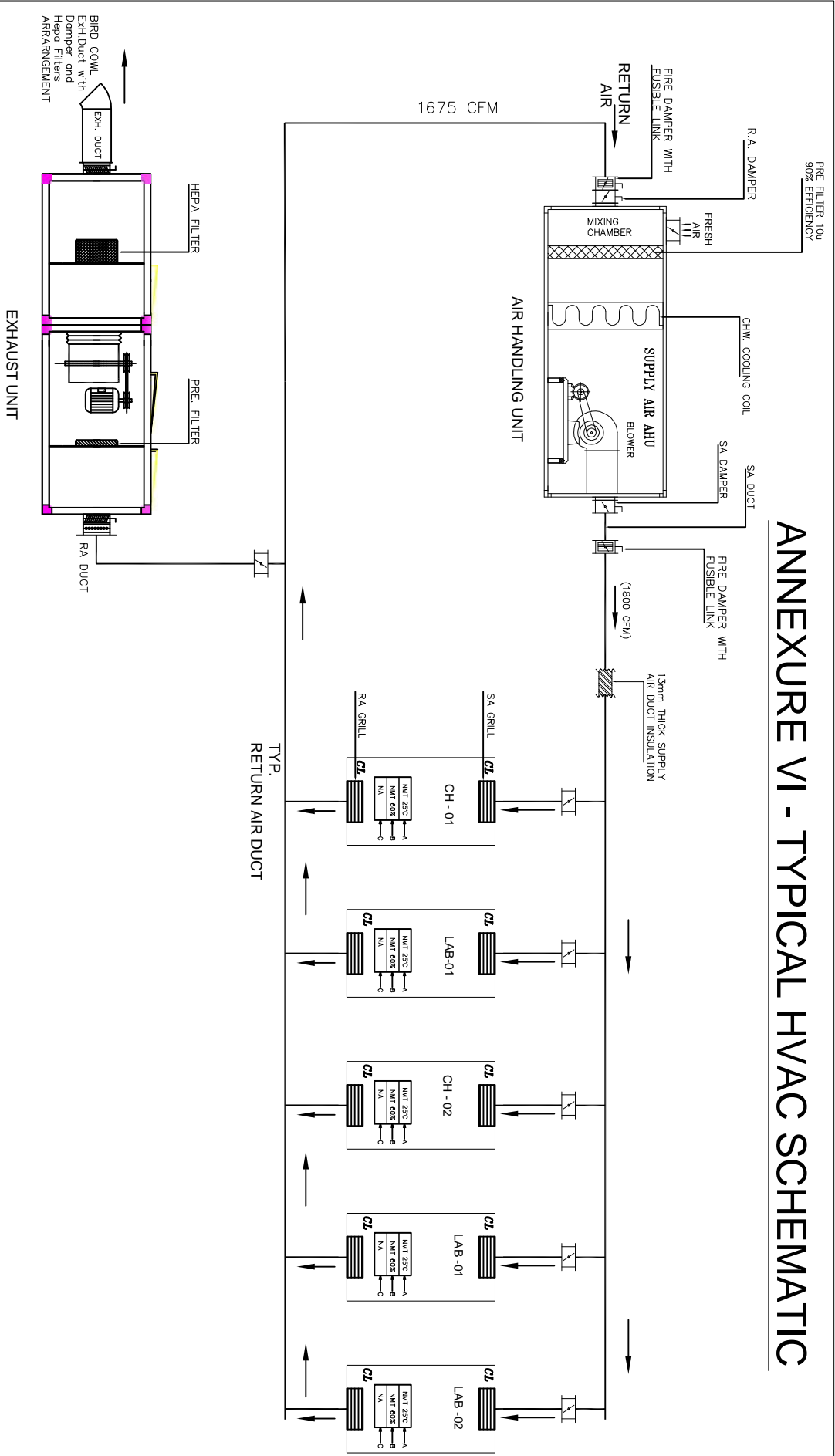
Place: \_\_\_\_\_

Date: \_\_\_\_\_

Signature of Tenderer \_\_\_\_\_

Seal of the Tenderer \_\_\_\_\_

# ANNEXURE VI - TYPICAL HVAC SCHEMATIC



LEGEND :-

	SA DIFFUSER		NMT - NOT MORE THAN
	RA DIFFUSER		CFM - CUBIC FEET PER MINUTE
	SA GRILL		S.A.T.B - SUPPLY AIR TERMINAL BOX
	RA GRILL		R.A.R - RETURN AIR RISER
			VFD - VARIABLE FREQUENCY DRIVE
			NC - NOT CONTROL
			RH - RELATIVE HUMIDITY
			TEMP - TEMPERATURE
			ACPH - AIR CHANGES PER HOUR
			ROOM DESIGN CRITERIA

A	DESIGN/TEMP	N.M.T.
B	DESIGN/RH	N.M.T.
C	ACPH	

HLL BIOTECH LTD.	
TITLE:-	Meas. unit: mm
TYPICAL HVAC SCH	Scale: NTS