



Ref: INS/L-6265/2017-2018(Y)

Date : 15/02/2018

### ENQUIRY

Dear Sirs,

Please let us have your lowest Quotation for the following :

Sl.No	Cat.No	Item Description	Make/Model	Item Qty	UOM
1		SITC of Seamless copper tubes of required size complete with fittings and Aluminium foil backed moulded tubular insulation as required, with necessary wiring form indoor to out door	-	25.00	Mtrs.
2		Supply, installation, testing & commissioning of walk in cold rooms along with refrigerant units of various capacities to maintain an inside temperature of 4 + 1 oC. As per the technical specifications and detailed DRAWINGS attached. SECOND AND THIRD FLOOR V1 AND V2 WING COLD ROOMS Refrigeration unit capacity -- 3Nos of 10000BTU each Room dimensions- W 2900mm X D5600mm X H2400 (External clear) Cold rooms as mentioned as above(Detailed drawings attached)	ANY	4.00	Nos.
3		SECOND FLOOR SOUTH WING COLD ROOM Refrigeration unit capacity -- 2Nos of 6000BTU each Room dimensions- W 2550mm X D 3300mm X H 2400 (External clear) Cold rooms as mentioned as above(Detailed drawings attached)	ANY	1.00	No.



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**Remarks: The Tenders can also be quoted in foreign currencies- USD/Euro/JPY/GBP/SGD/CAD or any other currencies approved/traded by RBI.**

**NOTE:\*\*inStem is a public funded research institute and is entitled to concessional rate of GST @ 5% for items supplied for research purpose. The offer should be submitted after fully considering the above notification.\*\***

1. The bids shall be enclosed in an envelope , and due date sealed duly marked "Tender for \_\_\_\_\_" Ref No : \_\_\_\_\_. The bids should be addressed and to be mailed to "THE HEAD-PURCHASE". The bids are liable to be rejected if the sealed envelope is not addressed to "THE HEAD-PURCHASE" with Tender Ref No and Item Description and due date. The bids delivered in person shall be dropped in Purchase Section. If the bids are sent through courier or mail , it should reach by submission Date and Time and inStem will not be responsible for the delay.

**2. DUE DATE FOR SUBMISSION OF QUOTATION AGAINST THIS ENQUIRY IS  
26/02/2018 till 5.30pm**

3. QUOTATIONS RECEIVED AFTER THE DUE DATE SHALL BE REJECTED.

4. The Validity of your quotation should be for 60 days from the date.

5. All duties, taxes, surcharge and cess as currently applicable must be stated in your quotation, separately. Otherwise your quote is liable to be rejected.

6. Your quotation should indicate delivery period & Warranty period.

7. Delivery to be made to our Stores. Please indicate charges, if any extra. Transit Insurance should be done upto inStem Stores.

8. If you are unable to supply the quality, specifications or brand as mentioned in our enquiry, Please state so and then offer alternative to quality/Specifications.

9. Payment : within one month after delivery & acceptance/satisfactory installation.

10. Please ensure that the enquiry number and the due date is superscribed on the envelope failing which your quotation is liable to be rejected.

11. Since we are a public funded research institution, we are exempted from paying Customs Duty (Except ad valorem duty of 5% + 2% cess and CVD @4% vide Notification No.51/96 with latest amendments) and excise duty vide Notification No.10/97 CENTRAL EXCISE dated 01-03-1997 for all scientific equipments, technical instruments, equipments (including computers), their accessories, spares, consumables and software. Hence, please offer your prices taking this option into consideration.



**Institute For Stem Cell Biology and Regenerative Medicine**  
Autonomous institute of the Department of Biotechnology, Government Of India



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12. If the item is covered under DGS&D rate contract, please quote the rate as per the DGS&D rate contract with xerox copy of the DGS&D order.

13. Any dispute or differences that may arise between the parties shall be referred to the sole arbitration of the Centre Director or his nominees. The decision of the arbitrator shall be final and binding on the parties. The venue for arbitration shall be Bangalore. The provisions of the Arbitration and Conciliation Act, 1996 as amended from time to time shall apply. The Courts in Bangalore shall have exclusive jurisdiction to deal with any or all disputes between the parties.

Yours faithfully

For and on behalf of Institute For Stem Cell  
Biology and Regenerative Medicine

Yesu R

GKVK, Bellary Road, Bangalore-560065, INDIA

Phone No. : 91-80-23666343/344/345/346

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Website : www.ncbs.res.in



# INSTITUTE FOR STEM CELL BIOLOGY AND REGENERATIVE MEDICINE

**Ref No: INS/L-6265/2017-2018(Y)**

DESCRIPTION	QTY
Supply, installation, testing & commissioning of walk in cold rooms along with refrigerant units of various capacities to maintain an inside temperature of 4 + 1 o C. As per the technical specifications and detailed DRAWINGS attached.	
<b>01</b> SECOND AND THIRD FLOOR V1 AND V2 WING COLD ROOMS	
<b>a</b> Refrigeration unit capacity -- 3Nos of 10000BTU each	
<b>b</b> Room dimensions- W 2900mm X D5600mm X H2400 (External clear) Cold rooms as mentioned as above(Detailed drawings attached)	04Nos.
<b>02</b> SECOND FLOOR SOUTH WING COLD ROOM	
<b>a</b> Refrigeration unit capacity -- 2Nos of 6000BTU each	
<b>b</b> Room dimensions- W 2550mm X D 3300mm X H 2400 (External clear) Cold rooms as mentioned as above(Detailed drawings attached)	01 No.
<b>03</b> SITC of extra piping SITC of Seamless copper tubes of required size complete with fittings and Aluminium foil backed moulded tubular insulation as required, with necessary wiring form indoor to out door	20 Rmts.

**Note: Vendor shall enclose all technical details, and manuals of the equipments offered.**



## TECHNICAL SPECIFICATION FOR WALK-IN COLD ROOMS.

Supply, installation, testing & commissioning of WALK – IN COLD ROOMS ALONG WITH REFRIGERATION UNITS to maintain an inside temperature of  $4 + 1$  o C.

**CONSTRUCTION:** The enclosure cabinet shall be well finished and made of factory pre-formed injected 60mm thick PUF panels with min. 0.5mm thick STAINLESS STEEL of SS304 or better grade interior finish and min. 0.5mm thick PPGI exterior finish. The external dimensions shall be as per the drawing attached. Side joints shall have cam-lock arrangement. Please furnish the internal clear dimensional details along with the offer.

**THE FLOOR:** Factory engineered and factory pre-fabricated 'Floor panel' with 60mm thick injected PUF panel with min. 0.5mm thick PPGI bottom and min. 12mm thick marine plywood and top finished with min. 3mm Aluminium chequered sheet.

**THE CEILING:** Factory pre-formed 60mm thick PUF panels with min. 0.5mm thick stainless steel (SS 304 or better grade) inside finish and PPGI sheets on outer finish. All the ceiling panels shall be supported from vertical side walls on both the opposite ends. There shall be no end to end joints in the ceiling (lateral / side joints are fine, but two panels shall not be in butt joint formation at the center, which would allow to develop cracks / gaps by self weight)

**THE DOOR:** The door shall be single, hinged, side swing type, left hand opening, flush type and opening outside. The door specification shall be same as that of wall panels and shall have gasket lining for Air tight closing. The door shall have Anti-condensation Door Heater, Posi seal Closure, Pad Lock System, Human Safety release knob. The door shall have a suitable handle arrangement. The door entry cutout dimensions shall be as per the drawing, a matching door to meet the cold room requirement shall be made. The door shall have a 300mm X 300mm double glass anti condensation view port with suitable heaters (to avoid condensation & have a clear view) suitable for cold room.

### WALL & CEILING PANELS:

Insulation Core thickness for walls

Density

Inner skin Of the panels

Outer skin Of the panels

Jointing (panel to panel)

Sealing (be used).

: Min. 60 mm PUF insulation

: 38 - 40 kg/m<sup>3</sup>

: min. 0.5mm thick stain less steel (SS 304 grade or better).

: min. 0.5mm thick pre coated / painted GI sheet steel

: Cam lock arrangement.

: Silicon sealant by pressure gun (Only GN sealant shall be used)

### TECHNICAL SPECIFICATION

Internal load : 800W max.

Number of door openings : 60 per day

Max. ambient temp : 36 Deg.C

Cold Room Temp. Required :  $4 + 1$  o C.

Refrigerant : R 404A, R410a,R134A

Evaporating units: SS cabinet with fan, and, coil of copper tube with aluminum fins.



**OD Condensing units:** Air cooled, prepainted GI cabinet housing compressor, copper coil with aluminum fins condenser, electrical terminal block with isolation switch.

**Refrigerant Piping :** Seamless copper tubes of required size complete with fittings and Aluminium foil backed moulded tubular insulation as required. Approximate average distance from indoor unit/s to outdoor unit/s would be around 10m per circuit. Total 10mts for each unit shall be considered. This shall be included in the cost of the machine.

**Protection Schemes :** Independent HP & LP protection for each refrigerant circuit wired to trip the system and suitable alarm through the controller.

**TEMPERATURE CONTROLLER :**

Electronic controller with pre set logic of temperature and compressor switching along with digital display of the room temperature. The controller shall have an inbuilt on-delay timer of 2 to 3 minutes for the compressor. The controller shall automatically re-start the refrigeration system on electric power resumption. The digital temperature indicator shall be installed at the outer wall of the panel near the door. The alpha numeric temp. display shall have a min. height of 19mm. This controller should be capable of giving HP, LP trip indications and subsequently trip the unit in case of such incidents. The control wiring for the controller and interlocking will be in contractor's scope, but shall be approved by Engineer-In-Charge before installation.

**ELECTRICAL WORKS :**

Two / Three numbers of 16A, 230V/440V, 50Hz, single phase outlet will be made available at site near to the in-door units. Further entire electrical works including tapping supply for entire cold room, further power & control cabling, providing weather proof isolator & plugs near each out-door unit and control of all the working & standby units based on pre-set logic is included in the scope of the contract.

All the electrical works to be done as per standard practice using approved materials of reputed make. Wherever un-armoured cables are used, they have to be properly protected mechanically with GI re-inforced flexible conduits with all accessories to be used. All this is included in the scope of the work.

**LIGHTING :**

Providing 2 nos. of 28W FL or 18W/20W LED, 1200mm long, Vapor-Proof interior (Philips make) with switch control is included in the scope.

**NOTE :**

The control logic shall be approved by the Engineer-In-Charge and no cost implication shall be entertained for this.

Make: Bluestar / Carrier /Rinac / Voltas

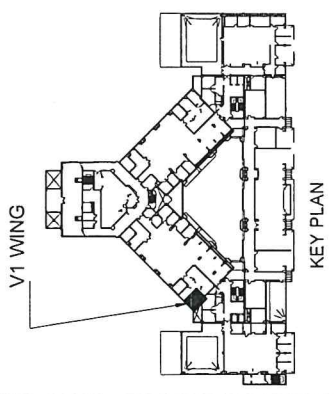
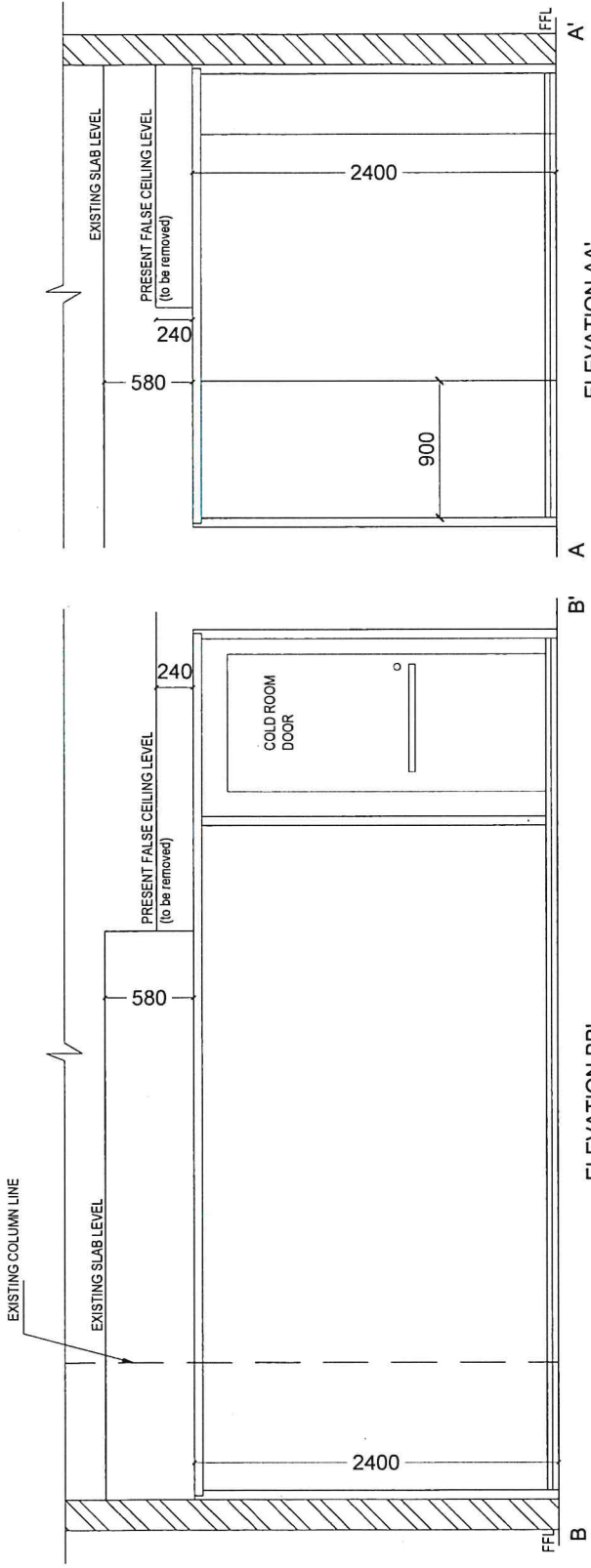
Compressor Make: KIRLOSKER/ Emerson Copeland/Danfoss/OEM.



**IMPORTANT :**

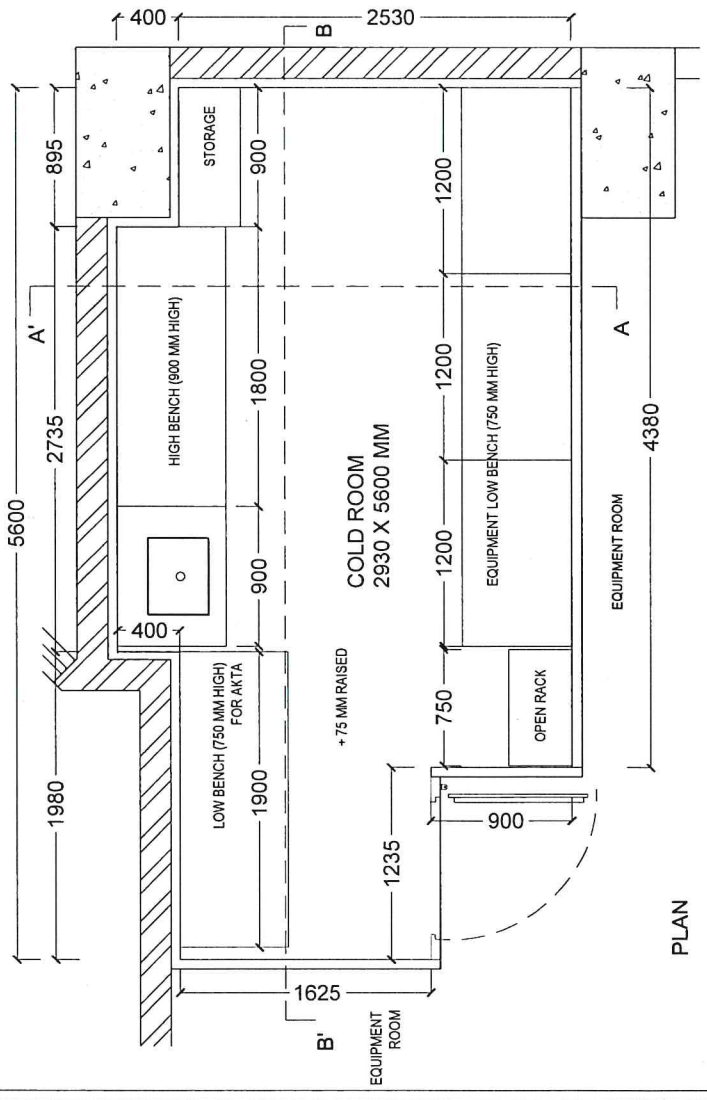
1. The dimensions given in the drawings are indicative only. Please check at site for exact dimension for accurate finish. However the dimension may not vary more than + 4%. Indicate the internal clear dimensions
2. Suitable drain piping is included in the scope of work, as per site conditions.
3. Any other item or accessories required for proper sealing, operation, sensing, indication, control, protection of the equipment & users etc. are included in the scope of the work. Work should be complete in all respects to commission the cold room.
4. Please inspect the site for exact dimensions, its appraisal etc. before fabrication. Vendor has to match the site dimensional requirements as per the Engineer –In charge’s instructions.
5. The cold room GA drawings including door position, panel lay out, ID & OD unit position, Refrigerant line, electrical cabling, power & control drawings are to be got approved before fabrication and installation.
6. The safety of men, materials & tools is solely the responsibility of the contractor.
7. Indicate guarantee & Warrantee details. Minimum warranty shall be one year from the date of commissioning.
8. Also pls. indicate the Rmt rate of copper tubing and cabling which can be used if the Rmt given is varying.
9. Give full technical details of the models offered including ID unit Airflow volume, velocity, noise values etc. indicate the methods if the reduction in these values are possible.
10. Detailed Drawings are provided along with the enquiry, please go through the drawings properly and quote accordingly.





## SECOND & THIRD FLOOR V1 WING

QUANTITY REQUIRED : 2 NOS



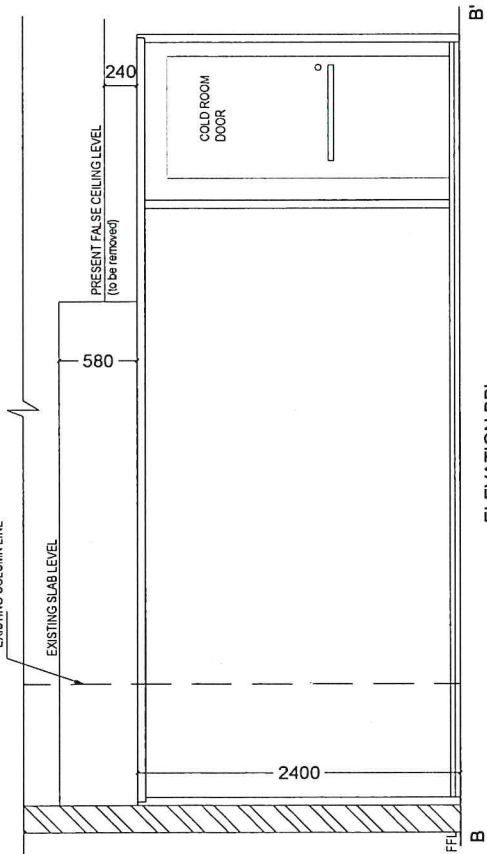
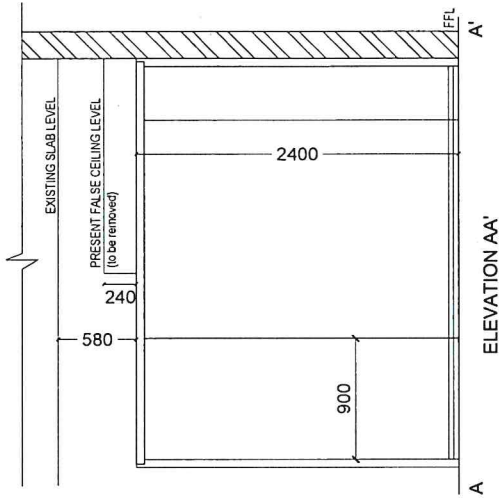
**NOTE:**  
 1. Do not scale the drawing. Read the dimensions only, all measurements are in MM only.  
 2. Site conditions to be checked before commencing work and final measurements prevailing at site shall be considered before fabrication.  
 3. Discrepancy if any, should be brought to the notice of Architect for clarification.  
 4. The drawings are indicative of the requirements only.

PROJECT:	DESIGN & PROVIDING COLD ROOM DETAILS TO THE INSTEM LABORATORIES AT GKVK, BANGALORE
TITLE:	TYPICAL COLD ROOM DETAILS FOR SECOND FLOOR V1 WING
APPROVED:	DEALT : NOOR ZAINAB
POORNIMA, U.B HEAD ARCHITECT	SCALE : NTS DATE : 02/02/2018
DRG. NO :	NCBS/inStem/SF&TF - 01



**ncbs**  
 national centre for biological sciences  
 tata institute of fundamental research  
 GKVK campus, Bellary Road, Bangalore 560 065 India



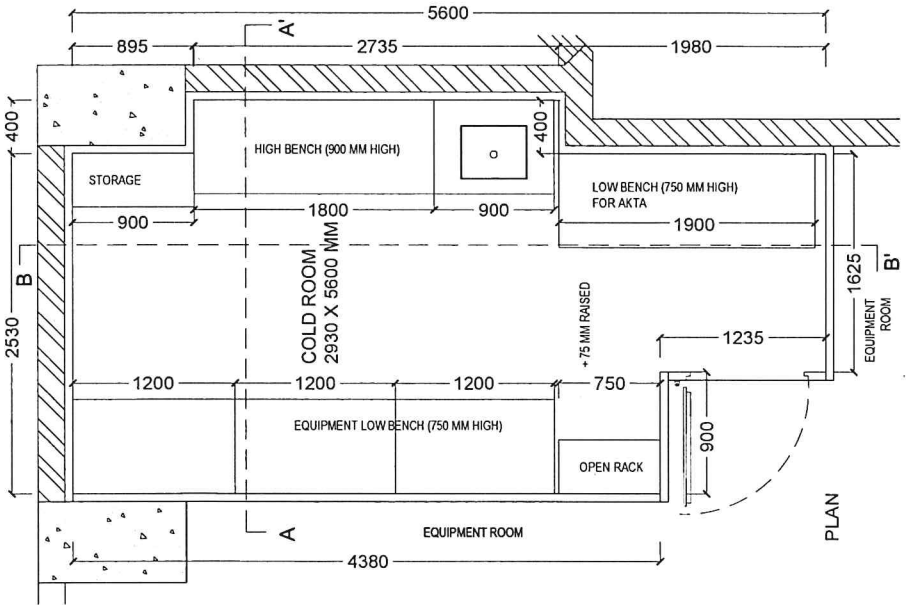


ELEVATION BB'

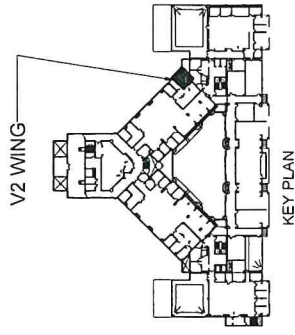
ELEVATION AA'

## SECOND & THIRD FLOOR V2 WING

QUANTITY REQUIRED : 2 NOS



PLAN



**NOTE:**  
 1. Do not scale the drawing. Read the dimensions only, all measurements are in MM only.  
 2. Site conditions to be checked before commencing work and final measurements prevailing at site shall be considered before fabrication.  
 3. Discrepancy, if any, should be brought to the notice of Architect for clarification.  
 4. The drawings are indicative of the requirements only.

PROJECT :	DESIGN & PROVIDING COLD ROOM DETAILS TO THE INSTEM LABORATORIES AT GKVK, BANGALORE
TITLE :	TYPICAL COLD ROOM DETAILS FOR SECOND FLOOR V2 WING
APPROVED :	DEALT : NOOR ZAINAB
POORNIMA LUB HEAD ARCHITECT	SCALE : NTS DATE : 02/02/2018
DRG. NO. :	NCBS/inStem/SF&TF - 02



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