



National Center for Biological Sciences

Tata Institute of Fundamental Research

GKVK, Bellary Road, Bangalore 560 065. India

Tel. No : 080 2366, , 6344

Email: sampattuks@ncbs.res.in, www.ncbs.res.in

Ref:NCB/CA17-265/163419

January 24, 2018

ENQUIRY

Dear Sirs

Please let us have your Quotation for the following:

S.No.	Item Description	Qty	UOM
1	mounted on a base plate with lockable and position adjustable base plate for motor. Drive connection with minimum double grooved pulleys I V belts. Mesh protected water washable type 5 micron, 90% efficiency air filter. Enclosure to be well finished with sturdy support structure. There shall be a view port for fan-motor section along with a 11W CFL water tight bulkhead light fitting with door limit switch. Detailed specifications I typical drawings are enclosed (dimensions suggestive).	1.00	NO

NOTE:

- Each page of technical specifications shall be signed by the contractor along with date and seal. and submitted along with the offer.
- Dimensional details I GA of AHU are to be enclosed with the quote.
- AHU GA I dimensional drawings to be got approved before fabrication.
- Drawings of the typical AHU are enclosed for reference. Exact drawings shall be developed from the vendor.

Approved makes of items;

Centrifugal Fans: Kruger- BDB 500 or equivalent in nicotra or comefri.  
Air filters: Aerosol / MNR / OEM / equivalent.  
Pulley, Belts: Fenner.  
Motor: ABB, Siemens, Crompton and greaves, Bharat bijlee (eff 1 )

All other items: ISI / approved items only to be used

1. The bids shall be enclosed in an envelope and due date sealed duly marked Tender for \_\_\_\_\_ Ref No: 163419. 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 NCBS will not be responsible for the delay.

**2. DUE DATE FOR SUBMISSION OF QUOTATION AGAINST THIS ENQUIRY IS 08/02/2018**

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

4. The validity of your quotation should be for 60 days from the due 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 NCBS 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 1% Cus Sec & High Edu. CESS 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

**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

National Centre for Biological Sciences



SAMPATTU K S

## Schedule of quantities for cluster AHU

Sl. No.	Description of item	Qty	Unit
1	<p>Supply of modular, sectionalized double skin AHU with BDB 500 model Backward Curved fan of 15000CFM flow and 20TR nominal cooling capacity, 40mm WG static pressure along with 5.5Kw eff1 4pole motor.</p> <p>The AHU shall be bottom discharge type vertical unit.(suitable for server rooms)</p> <p>Cooling coil shall be 8 row deep ,vertically mounted, chilled water cooled copper cooling-coil with fin face area of min. 18 Sq.ft. SS drain tray.</p> <p>Motor shall be mounted on a base plate with lockable and position adjustable base plate for motor. Drive connection with minimum double grooved pulleys &amp; V belts.</p> <p>Mesh protected water washable type 5 micron, 90% efficiency air filter.</p> <p>Enclosure to be well finished with sturdy support structure.</p> <p>There shall be a view port for fan-motor section along with a 11W CFL water tight bulkhead light fitting with door limit switch.</p> <p>Detailed specifications &amp; typical drawings are enclosed (dimensions suggestive).</p>	1	No

### NOTE:

1. Each page of technical specifications shall be signed by the contractor along with date and seal, and submitted along with the offer.
2. Dimensional details & GA of AHU are to be enclosed with the quote.
3. AHU GA & dimensional drawings to be got approved before fabrication.
4. Drawings of the typical AHU are enclosed for reference. Exact drawings shall be developed from the vendor.

### Approved makes' of items;

Centrifugal Fans: Kruger- BDB 500 or equivalent in nicotra or comefri.

Air filters: Aerosol / MNR / OEM / equivalent.

Pulley, Belts: Fenner.

Motor: ABB, Siemens, Crompton and greaves, Bharat bijlee (eff 1 ) / equivalent

All other items: ISI / approved items only to be used

Contractor Signature:

Company Seal:

Date:



**Detailed Specifications:** Supply of well finished AHUs with double skin enclosure operating on Chilled water supply at 8.0 deg C, as per the following;

	AHU details		Remarks by vendor
<b>1</b>	<b>AHU Enclosure</b>		
a)	AHU cooling Capacity / flow/ type	20TR/ 15000CFM/Vertical	
b)	Static pressure	40 mm WG (total)	
c)	Fan discharge	Bottom	
d)	AHU frame work	Aluminum hollow profile	
e)	AHU Panel	Double skin, all the panels to be fixed with easy hand removable fasteners & flush type door handles.	
f)	Outer skin	0.6 mm pre coated GI	
g)	Inner skin	0.6 mm pre coated GI	
h)	Panels thickness	50 mm $\pm$ 2 mm (minimum)	
i)	Insulation density / material	40 kg $\pm$ 2 Kg / CFC free PUF	
k)	Hinged / fixed Access door	To be provided ( bolt fixed)	
	<b>Overall size</b>	Should not exceed as Height-3000mm,Width-1700 Depth-1300mm. The sizes mentioned are complete, including panel door fasteners. Visit the site to evaluate. (10% variation in dimensions are allowed)	
<b>2</b>	<b>AHU Fan section details</b>		
a)	Fan Type	DIDW, Backward curved	
b)	Capacity / static pressure	15000 CFM / 40mm WG	
c)	Outlet velocity	Less than 8 m/s (AHU room noise to be less than 55 dB(A))	
d)	Motor & Fan mounting	<b>. Both motor &amp; fan should be on a common base plate to avoid relative movement</b>	..
e)	Motor adjustable base plate	Adjustable base plate suitable for motor of frame size	
f)	Drive connection between motor & fan	Twin V-belt with double grooved pulleys	
g)	Canvas material, Fan outlet connection to AHU body connection	fire retardant and water proof material.	

Contractor Signature:

Company Seal:

Date:



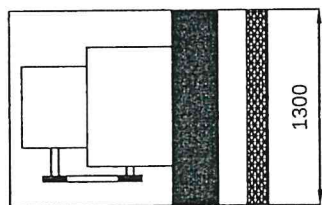
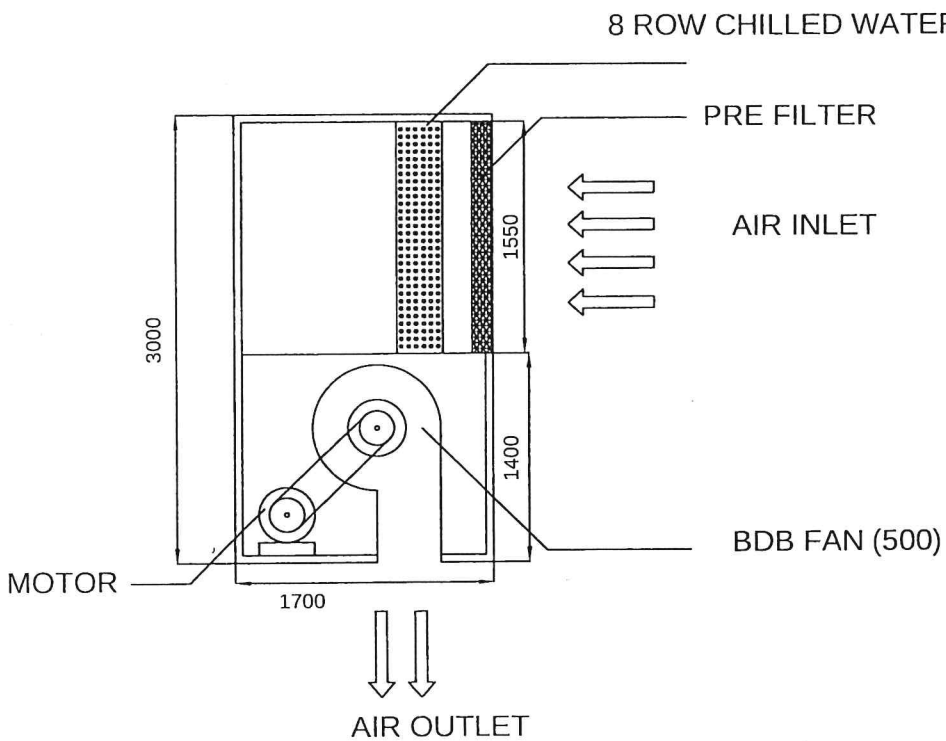
h)	View port & light	View port at a suitable position. 11W CFL water tight bulk-head light fitting (along with 11W CFL bulb, pin type) with door limit switch.	
3	<b>Coil section details</b>		
a)	Face area / rows deep	Minimum 18Sq.ft / 8 rows	
b)	Required temperature & RH in conditioned space	To achieve < 18 deg.C & < 65% RH	
c)	Air purge vent at the top of the coil	In Return header. To be accessible from the top front panel	
d)	Drain tray	Min. 22 SWG, SS tray with ¾" BSP female threaded MS Socket.	
4	<b>Filter section details</b>		
	Type / Flow.	Flush mounted to AHU.	
	Filtration level	10 micron, 90% efficiency	
	Media & mechanical protection	Water washable synthetic media with aluminum mesh	

Contractor Signature:

Company Seal:

Date:





TOP VIEW

NOTES :-

1. ALL DIMENSIONS ARE IN MM.
2. DO NOT MEASURE THE DRAWING, READ THE DIMENSIONS ONLY.

Title: Tentative AHU drawing for Cluster

