

## Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth Dapoli

### e-Tender1 Form

### For purchase of

- 1. Customized air handling unit
- 2. PID sensor system
- 3. Test chamber

All India Coordinated Research Project on Plastic Engineering in Agriculture Structure and Environment Management (PEASEM),

College of Agricultural Engineering and Technology, DBSKKV Dapoli, MS, India, Pin: 415712

Email: aicrp.petdapoli@gmail.com



#### Dapoli 415 712, Dist. Ratnagiri (MAHARASHTRA)

Phone No. (02358) 282414; Fax. (02358) 282414

Email: aicrp.petdapoli@gmail.com



No. CAET/AICRP-PEASEM/e-Tender/ 16 0 /2021

Date:

**2** 5 JAN 2021

#### e-TENDER NOTICE NO. 1

Sealed tenders in the prescribed form are invited (in e-Tendering format only) in "D form" (that is in two envelope system) for purchase of 1.Customized air handling unit; 2. PID sensor system; 3. Test chamber from the registered manufacturers or authorized dealers or representatives of local/international manufacturers by the Associate Dean, College of Agricultural Engineering and Technology, Dr.B.S.K.K.V., Dapoli on or before 03/02/2021 (upto 5.30 pm). The tender form can be downloaded online but the form cost Rs.4200/- (Non Refundable), which can be paid online using e-tendering system. The tender forms will not be supply through post. The sealed tenders are proposed to be opened on 05/02/2021 (at 5.35 pm). The brief details of the equipments to be purchased, EMD details and cost for the tender form are as follows.

Sr. No.	Name of the Equipment's	Amount of E.M.D. in Rs.	Period of completion	Tender form fee (Non-refundable
1	<ol> <li>Customized air handling unit (AHU)</li> <li>PID sensor system</li> <li>Test chamber</li> </ol>	Rs. 70000/-	Maximum two months from the order date	Rs. <b>4200/- per set</b>

The rates shall be quote for Dapoli as destination and including the all taxes, installation etc. considering the detailed specifications given in Appendix-II. No extra payment will be made on any ground thereafter. The e-Tender form will be only considered/opened if all the technical documents be attached with the tender. Any type of exemption for EMD will not be accepted by this University. Also, in case of successful bidder, 3% (including EMD amount) of the final order amount will be withheld as 'Security Deposit' for the period of 1 year (i.e. Warranty Period). The University reserves all the right to purchase or not to purchase any of this equipment/material and quantity may vary accordingly. All other details are included in the tender form, which is also available on the University website www.dbskkv.org

90

Associate Dean

College of Agricultural Engineering and Technology, Dr. B.S.Konkan Krishi Vidyapeeth, Tal. Dapoli, Dist. Ratnagiri. (M.S.)

Place: Dapoli

Date: **2** 5 JAN 2021



Dapoli 415712, Dist. Ratnagiri (MAHARASHTRA) Phone No. (02358) 282414; Fax. (02358) 282414 Email: aicrp.petdapoli@gmail.com



No. CAET/ AICRP-PEASEM/e-Tender/ | 60 /2021

Date:

#### e-TENDER NOTICE NO. 1

2 5 JAN 2021

Sealed tenders in the prescribed form are invited (in e-tendering format only) in "D form" (that is in two envelope system) for purchase of following equipments from the registered manufacturers or authorized dealers or representatives of local/international manufacturers by the Associate Dean, College of Agricultural Engineering and Technology, Dr.B.S.K.K.V., Dapoli.

Sr. No.	Name of the Equipment's	Amount of E.M.D. (Rs.)	Period of completion	Tender form fee (Non-refundable)	
1	<ol> <li>Customized air handling unit (AHU)</li> <li>PID sensor system</li> <li>Test chamber</li> </ol>	Rs.70000/-	2 Months (Maximum)	Rs. <b>4200/- per se</b> t	

#### e-TENDER 1 SCHEDULE

Sr. No	Procedure for Dr. Balasaheb Sawant Konkan Agricultural University	Procedure for Contractor/ Vendor	Start Date and Time	Expiry Date and Time	Envelope Remarks
1	Release e-Tender	· · · · · · · · · · · · · · · · · · ·	25-01-2021 Time 10:00	- -	-
2	· -	e-Tender download	25-01-2021 Time 10:00	03-02-2021 Time 17.30	Submission of Technical (T1) and Commercial (C1) envelope
3	-	e-Tender preparation	25-01-2021 Time 10:00	03-02-2021 Time 17.30	Submission of Technical (T1) and Commercial (C1) envelope
4	Close for Technical Bid	-	03-02-2021 Time 17:35	04-02-2021 Time 10:00	Technical (T1) envelope submission will be closed.
5	Close for Price Bid	-	03-02-2021 Time 17:35	04-02-2021 Time 10:00	Commercial (C1) envelope submission will be closed.
6	-	Online submission of e-Tender	04-02-2021 Time 10:05	05-02-2021 Time 17:30	Final submission of tender (Payment of service provider)
7	Technical Bid Opening (If possible/Time may vary)	-	05-02-2021 Time 17:35	08-02-2021 Time 17:30	Technical (T1) envelope will be opened.
8	Price Bid Opening (If possible/Time may vary)	-	05-02-2021 Time 17:35	08-02-2021 Time 17:30	Commercial (C1) envelope will be opened.

<u>Note:</u> Please do enquiry regarding the date of opening of technical and price bid, in the office of Associate Dean, College of Agricultural Engineering and Technology, Dr. Balasaheb Sawant Konkan Agricultural University, Dapoli, District- Ratnagiri. Email enquiry will be preferred on: aicrp.petdapoli@gmail.com

#### **General Terms and Conditions**

- 1. When submitting the e-tender documents to the government website, there is need to submit following scanned copies of original /self-attested documents on the website.
  - 1. Registration Certificate of a firm / company.
  - 2. Certificate of manufacturer (Self declaration on company's letter head) or Certificate for authorized dealer / representative of local / international manufactures (On the manufacturer's letter head).
  - 3. GST certificate / number
  - 4. Last three years (2019-20, 2018-19 & 2017-18) income tax return certificates for old firm / company. In case of new firm, last one year (2019-20) income tax return certificate is **must**.
  - 5. PAN card of the company / firm.
  - 6. Certificate of previous work / client's list on a company's letter head (The dealers / representative of local / international manufacturers **must** submit certificate for previous work / client list issued by their manufacturer on the company's letter head).
- 2. As per Government policy, the e-tender documents are going to submit online only hence, there is **no need** to resubmit e-tender documents to the office by post.
- 3. The documents in the technical bid (Envelope T1) will be confirmed only after verifying the original documents, in case of any doubt about the documents. The tenderer's price bid (Envelope C1) will not be opened in case of technical documents and other verifications are found to be unsatisfactory and this will not be reported individually to such tenderers. Also, in this matter the decision of the purchase committee of the university will be final and binding on the tenderer.
- 4. The e-tender form fee for this work is to be paid online before downloading, the e-tender form as well as the EMD amount is to be paid online only. The supplier has to pay all the amount online only. There will not be any concession or discount on e-tender form fee / EMD amount / security deposit. Also, any type of amount is not to be pay directly to any university account through the bank. It means, all the transactions are to be done through debit or credit card. There is need to pay e-tender form fee and EMD amount by considering the bank commission and other bank charges.
- 5. All eligible / interested tenderers are need to register at the main website, <u>maharashtraetenders.in</u> or <u>adf.maharashtra.etenders.in/common/home.asp</u> or <u>https://mahatenders.gov.in</u> of the e-Tender system, to download the tender and participate in the tender process. The suppliers involved in the e-Tender process should have to pay amount of Rs. 1092 / (One thousand ninety two only) per e-tender for preparation of e-tender. This amount is required to be paid online by the tenderer during the period of e-tender Decryption/Re-encryption.
- 6. All the details of the tender notice are available from <u>25/01/2021</u> on the University website: www.dbskkv.org, also available on <a href="https://mahatenders.gov.in">https://maharashtra.etenders.in</a>
- 7. Tenderers can contact the following telephone number if they have any doubts / issues regarding submission of tender, online certificates and delivery of digital certificates: Sify Technologies Ltd./Nextenders, Helpdesk Support: 9356492848, 9356468309, 7506797596 Email: support.gom@nextenders.com
- 8. If the holiday is declared on the date of opening of the tender, the working of that particular day will be carried out on the next working day.
- 9. The supplier whose tender will be accepted, has to accept warranty conditions in the prescribed format on the bond paper of Rs. 500/-.
- 10. Other terms and conditions will be available in the e-tender form. The signed authority reserves the right to reject any tender or all tenders at any stage without giving any reason.
- 11. Since the works in the tender are time bound, the tenderer will be obliged to complete the work within the prescribed timeframe from the date of issue of confirmed order. The Associate Dean,

- College of Agricultural Engineering and Technology, Dapoli reserves all the rights about giving extension for completion of the work in the situations deemed appropriate.
- 12. There is need to provide Tax Invoice including material supply duration, warranty, guaranty, transportation at the destination (DBSKKV Dapoli).
- 13. For the more information, the tenderer can contact to the office of the Associate Dean, College of Agricultural Engineering and Technology, Dr. Balasaheb Sawant Konkan Agricultural University, Dapoli, District Ratnagiri; during the working hours (9 am to 5.30 pm)
- 14. 3 % security deposit amount will be charged from the successful tenderer. The amount will be adjusted through the EMD amount. Also, the security deposit will be returned after the warranty period and the supplier must surrender the original receipt while asking for the refund of the security deposit.

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Associate Dean
College of Agricultural Engineering and
Technology, Dr. B.S.Konkan Krishi Vidyapeeth,
Tal. Dapoli, Dist. Ratnagiri. (M.S.)

Place: Dapoli

Date: 2 5 JAN 2021

#### CC (By email):

- 1. Hon. Director General, Maharashtra Krishi Shikshan Parishad, Survey No. 132 / B, Bambara, Bhosalenagar, Pune.
- 2. The Registrar, Dr. Balasaheb Sawant Konkan Agricultural University, Dapoli with request to circulate e-Tender notification among all EC members of DBSKKV Dapoli by email.
- 3. AKMU, Dr. Balasaheb Sawant Konkan Agricultural University, Dapoli with request to upload e-Tender notification on the university website with immediate effect and keep it upto last date (03/02/2020 upto 17.30 pm) of tender submission.





Dapoli 415712, Dist. Ratnagiri (MAHARASHTRA) Phone No. (02358) 282414; Fax. (02358) 282414

Tender for purchase: 1.Customized air handling unit; 2. PID sensor system; 3. Test chamber

by

Associate Dean,
College of Agricultural Engineering and Technology,
Dr. B.S.Konkan Krishi Vidyapeeth,
Tal. Dapoli, Dist. Ratnagiri. (M.S.)

Phone No. (02358) 282414 Fax. (02358) 282414 Email: aicrp.petdapoli@gmail.com

#### **Summary**

Date of issue of tender form	:	25/01/2021
Last date for receipt of sealed tender	:	03/02/2021 (upto 5.30 pm)
Date of opening of tenders	1:	05/02/2021 (at 5.35 pm)
Cost of tender form	:	Rs. 4200/- per set (Non-refundable)
Earnest Money Deposit (EMD)	:	Rs. 70000 /-
	Last date for receipt of sealed tender  Date of opening of tenders  Cost of tender form	Last date for receipt of sealed tender :  Date of opening of tenders :  Cost of tender form :





Dapoli 415712, Dist. Ratnagiri (MAHARASHTRA) Phone No. (02358) 282414; Fax. (02358) 282414

Email: aicrp.petdapoli@gmail.com

1. Customized air handling unit, 2. PID sensor system, 3. Test chamber

#### FORM OF TENDER

To,	

The Associate Dean, College of Agricultural Engineering and Technology, Dr. B. S. Konkan Krishi Vidyapeeth, Dapoli.

Dear Sir.

. In response to the tender notice published in the daily newspaper					, dated the							
	University	website	www.dbskkv.org,	I/We	submit	herewith	the	tender	form	for	Supply	of
							series and a series at					

- 2. I/We have thoroughly examined and understood the terms and conditions of the tender contained in Appendix-I (Part I) and I/We agree to abide by them in full.
- 3. I/We offer to undertake the supply of equipment/Instrument and have quoted the rates inclusive of all taxes, freight etc. for destination as given in Appendix II. It is agreed that, there is no additional charges other than those mentioned in word (in the bid form or Appendix-II) payable to me/us.
- 4. I/We accept that the rates offered shall remain valid for a **period of three months** from the date of execution of agreement. I/We further agree that if the date upto which the offer would remain open be declared as holiday for office, then offer will remain open for acceptance till next working day.
- 5. I/We shall be bound by communication of acceptance of the offer, dispatched within prescribed time.
- 6. I/We accept that the right to accept or reject whole or part of the tender without assigning any reason is reserved with the University. The decision of the University will be final and shall be binding on me/us.
- 7. As required by the terms and conditions of tender an amount of **Rs.70000** is paid by me/us as Earnest Money Deposit (E.M.D.) through online payment in favor of Dr. B.S. Konkan Krishi Vidyapeeth, Dapoli.
- 8. I/We agree to undertake the supply of the machinery/Instruments at location of office mentioned in the final order and as per the specifications of the final order (i.e. as given in Appendix-II) within period of <a href="two-months">two-months</a> from the date of firm order.
- 9. As rates are valid for three months. I/We also agree to undertake to supply scientific equipments in full or in part to other offices of Dr. B.S. Konkan Krishi Vidyapeeth, Dapoli spread over Konkan region under same terms and conditions against the supply orders up to the period of three months from the date of execution of Agreement/ Warranty Bond.

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10. As per the terms and conditions Appendix - I (Part-I), I/We are submitting our offer in two envelopes. In envelope one (T1), it contents documents as per the condition at Sr. No. 10 of part-I. In envelope two (C1), it includes rates quoted by me/us strictly in the format given in Appendix - II
11. I/We also agree that University has full rights to open/consider the envelope C1 if and only if University is satisfied with information contains in envelope T1. The decision of the University regarding this will be final and will be binding on me/us.
12. I/We hereby declare that the entries made in this tender form, i.e. in Appendix - II are binding for me/us. I/We shall be bound by the Act to my/our authorized representative duly constituted Attorney Shri.
13. I/We hereby take the responsibility of commissioning and maintaining the equipments for their satisfactory performance at their location(s) free of cost in the warranty period. I/We hereby also take the responsibility to provide the services (may be paid) for at least 5 years after expiry of warranty periods.
The following documents duly filled in and signed, are enclosed herewith. The Part-I of Appendix – I being the terms and conditions is retained by me/us for my/our information and record.
Yours faithfully,
Signature of the Supplier
Place: Date:
Capacity in which signing:
Name and Address of the firm/supplier:
Registration No. of the Supplier:
List of Documents attached:
<ol> <li>Part-II of Appendix - I</li> <li>Registration Certificate of a firm / company.</li> <li>Certificate of manufacturer (Self declaration on company's letter head) or Certificate for authorized dealer / representative of local / international manufactures (On the manufacturer's letter head).</li> <li>GST certificate / number</li> <li>Last three years (2019-20, 2018-19 &amp; 2017-18) income tax return certificates for old firm / company. In case of new firm, last one year (2019-20) income tax return certificate is must.</li> <li>PAN card of the company / firm.</li> <li>Certificate of previous work / client's list on a company's letter head (The dealers / representative of local / international manufacturers must submit certificate for previous work / client list issued by their manufacturer on the company's letter head).</li> <li>Appendix - II. (In envelope C1 only).</li> </ol>
Signature of constituted Attorney / authorized representative

Name and Address\_\_\_\_\_



Dapoli 415 712, Dist. Ratnagiri (MAHARASHTRA)

Phone No. (02358) 282414; Fax. (02358) 282414

Email: aicrp.petdapoli@gmail.com



### APPENDIX – I (PART I)

Terms and conditions of tender for supply of: 1. Customized air handling unit, 2. PID sensor system, 3. Test chamber.

- 1. Sealed Tenders are invited from registered manufacturers or authorized dealer of manufacturers or representatives of local/international manufacturers to supply 1. Customized air handling unit; 2. PID sensor system; 3. Test chamber as per the specifications mentioned in Appendix-II on or before the last date of 3/02/2021 (up to 5.30 PM). Tender received late will not be considered. The tenders are invited only by etendering system. The details are available at maharashtraetenders.in OR at adf.maharashtra.etenders.in/common/home.asp
- 2. The rates both in words and figures without any corrections or over writing should be quoted in Appendix II for each individual item separately. Any overwriting or rewriting should be duly countersigned. In case of any ambiguity (i.e. if the rates in words and figures do not match / only rate either in words or figures are written / rates not written ) the tender will not be considered and will be rejected.
- 3. The intending supplier shall also have to mention the main component details (Name of manufacturer / make / capacity) of the items offered (1. Customized air handling unit; 2. PID sensor system; 3. Test chamber) for which the rates are quoted. In the absence of the above details, items offered may not be considered. The preference will be given to (a) Registered manufacturer (b) Authorized dealer of manufacturer (d) Representatives of local/international manufacturers.
- 4. University will accept the tender for items/specifications mentioned in the prescribed format (Appendix II) only from (a) Registered manufacturer (b) Authorized dealer of manufacturer and (c) Representative of local/international manufacturers. The decision of the University regarding this will be final and shall be binding on the tenderer.
- 5. Tenderer will have to supply the material as mentioned in the specification and meet the quality standards and name of the manufacturer / company if mentioned in the specifications.
- 6. The University reserves the right to accept or reject the items of the make other than the above.
- 7. Tenderer may enclose published report of comparative study of his quoted items, which will give additional weightage to his quoted price.
- 8. The tenderer should quote the rates only in Appendix II of the tender floated on website by this office and not on any other form.
- 9. The tenderer should submit his offer in two separate envelopes.
- 10. The tenderer should provide the following documents in <u>envelope T1</u> with superscription i.e. "Tender for supply of 1. Customized air handling unit; 2. PID sensor system; 3. Test chamber".
  - 1. Part-II of Appendix I
  - 2. Registration Certificate of a firm / company.
  - 3. Certificate of manufacturer (Self declaration on company's letter head) or Certificate for

- authorized dealer / representative of local / international manufactures (On the manufacturer's letter head).
- 4. GST certificate / number
- 5. Last three years (2019-20, 2018-19 & 2017-18) income tax return certificates for old firm / company are must. In case of new firm, last one year (2019-20) income tax return certificate is must.
- 6. PAN card of the company / firm.
- 7. Certificate of previous work / client's list on a company's letter head (The dealers / representative of local / international manufacturers **must** submit certificate for previous work / client list issued by their manufacturer on the company's letter head).
- 11. The tenderer should provide rates quoted only in standard format (i.e. Appendix II only) in <u>envelope C1</u> with superscription i.e. "Tender for purchase of 1. Customized air handling unit; 2. PID sensor system; 3. Test chamber". This envelope should clearly state the serial number and name of the items from Appendix II for which rates are quoted by the tenderer.
- 12. The intending supplier should quote the rates inclusive of all expenses, charges, taxes, duties, transportation, packing and forwarding, installation charges including accessories, training charges, insurance etc. i.e. All "Inclusive". No any extra payment will be made besides quoted rates. The equipment will have to be supplied as per the specification within two months or as per the last date mentioned in final supply order.
- 13. University will reserve full rights to open/consider the second envelop if and only if University is satisfied with the information contained in envelope T1. The decision of the University regarding this will be final and shall be binding on tenderer.
- 14. The supplier will have to supply in full and not in part of the articles as mentioned in Appendix II to this University and any other Research Stations of University located anywhere in Konkan region till the date of Validity of rates.
- 15. If the ordered equipments are not provided within stipulated time limits, deduction @ 1% of the total cost order value per week for extra time taken will be charged from the bill. However, Associate Dean, College of Agricultural Engineering and Technology, Dr. B. S. Konkan Krishi Vidyapeeth, Dapoli may condone/relax the penalty and may grant extension up to the time limit as deem fit by him, provided the tenderer applies and satisfies about genuineness of the reasons for delay in supply of articles.
- 16. The tenderer shall have to deposit Earnest Money Deposit (E.M.D.) and tender cost online in the account of the university. The tender without EMD and tender form cost will not be considered at all. The amount of the EMD will be refunded online in case of unsuccessful tenderer. In case of successful tenderer, it will deemed as partial payment towards 3 % of Security Deposit and adjusted accordingly.
- 17. The Specimen of "Agreement / Warranty Bond" will be provided along with letter of acceptance to the tenderer whose rates are accepted by the University. The tenderer shall have to execute an agreement in the prescribed form on Stamp paper costing **Rs. 500/-** which should be submitted to this Office within specified time. The agreement received under seal and signature of the tenderer will become legal agreement between the tenderer and the undersigned, which will be binding on the tenderer.
- 18. If the successful tenderer fails to comply with the supply order within the specified period of two months (from the date of order) or only part supply is made, the Associate Dean, College of Agricultural Engineering and Technology, Dr. B. S. Konkan Krishi Vidyapeeth, Dapoli or respective authority or any officer authorized by him/them, will arrange for the alternative arrangement through any other supplier or agency at risk, cost and expenses of the said tenderer, who shall have to bear and pay all additional expenditure incurred by the University in that behalf.
- 19. Successful tenderer will have to furnish security deposit to the extent of 3 % of the rate quoted by the tenderer. This may be deducted from the bill payment or may be asked in the form of DD in the name of "Comptroller,

DBSKKV Dapoli. EMD will be adjusted towards this 3 % security deposit. This amount will be held with the University for the warranty period (i.e. for I year) and refunded, in normal case, to the tenderer after the warranty period.

- 20. The amount of Security deposit without any interest there will be returned to the tenderer after 1 year or the expiry of the warranty period whichever is later from the date of supply, subject to the surrender of money Receipt in original to this office.
- 21. On acceptance of the rates as per the approved tender and after completing necessary official formalities, the tenderer will be informed about the acceptance of the tender. The supply order will be placed by the Associate Dean, College of Agricultural Engineering and Technology, Dr. B.S.Konkan Krishi Vidyapeeth, Dapoli.
- 22. The tender submitted on or before the last date will be final and be binding on tenderer and the tenderer shall not be able to withdraw it after the final date.
- 23. The Associate Dean, College of Agricultural Engineering and Technology, Dr. B.S.Konkan Krishi Vidyapeeth, Dapoli also reserves the right to obtain the articles/instruments by negotiations with one or more tenderers, if in the case, the rates, quality, make, specification or other terms and conditions etc. of a tenderer are not found suitable, to this University.
- 24. The undersigned also reserves the right to accept or reject the supplies in full or in part which do not strictly stick up to the specifications or to accept the material/articles supplied with slight variations in specifications or with a condition that the rates accepted shall be reduced at such rates as the competent authority of the University may deem fit, looking to the variations and that such rates shall be binding on the tenderer.
- 25. University reserves the right to accept or reject higher version of material etc. or any other items under the same terms and conditions and same price quoted by tenderer in Appendix - II.
- 26. In case of successful tenderer, the University for Fulfillment of terms and conditions of tender shall retain the amount of Security Deposit (S.D.) deposited by him. The University will not make any payment towards interest on such deposits.
- 27. The credit bill should be presented in triplicate in the name of respective authority as quoted in final supply order is made. For any delay in payment, interest or any other kind of compensation, the University will not make extra payment, etc. This contract will be governed as per terms and conditions mentioned above, Agreement made and the provisions contained in M.A.U. Accounts Code, 1991. Delay in supply within the prescribed time limit or the extended time limit, making of supplies not up to the standard specification, and performance or non-observance or non-acceptance of these terms and conditions by the tenderer, shall constitute breach of contract and the security deposit or any other deposit of the tenderer shall be forfeited by this office besides other actions of reduction in bills of supplies and/or other legal actions and finally the decision of the University shall be binding on the tenderer.

Place: Dapoli

Date: 2 5 JAN 2021

**Associate Dean** College of Agricultural Engineering and Technology, DBSKKV Dapoli.

Enclosures: 1) Appendix – I (Part – II).

2) Appendix - II

#### APPENDIX - I

#### Part - II

#### Undertaking

{to be given by the tenderer for supply of 1. Customized air handling unit; 2. PID sensor system; 3. Test chamber}

Whereas, Associate Dean, College of Agricultural Engineering and Technology, Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli has called for tenders for supplies as per the enclosed Appendix - II.

I/We hereby offer our tender at the rates given in the enclosed Appendix-II, duly filled in and signed by me/us and hereby also affix my/our signature (s) below this tender voluntarily and full acceptance of all the terms and conditions of this tender, which shall be the agreement between the above tender calling authority and myself/we.

Signature of the Supplier:

Name of the Supplier:

Capacity in which signing:

Full address of the Supplier:

With seal/stamp:

Date:





Dapoli 415712, Dist. Ratnagiri (MAHARASHTRA) Phone No. (02358) 282414, Fax. (02358) 282414

Email: aicrp.petdapoli@gmail.com

#### **APPENDIX-II**

(Important Note: Rates should be quoted for DBSKKV Dapoli inclusive of all: <u>Transportation</u>, <u>installation</u>, <u>commissioning</u>, <u>training</u>, <u>service in warranty period & taxes</u>, <u>etc</u>. Also, the rates should be <u>exclusive</u> of work / material mentioned in "Special Notes" at the end of each equipment).

Name and specifications of the equipment.	Quan- tity	Rate per Unit (Rs.) In figures (and in words).
1) Customized Air Handling Unit (AHU)		
<ul> <li>Air Flow: Up to 4500 CFM (With provision to adjust desired flow rate between 0 to 4500 CFM). Application Area: Up to 4.5 m x 3.5 m x 3.5 m</li> <li>Output RH Range: 10 % to 98 % RH.</li> <li>(Note: Lower values of relative humidities should be as per the standard achievable range with respect to dew point temperature. There is no need of any dehumidification system to achieve lower relative humidity value beyond the dew point temperature. But to achieve higher relative</li> </ul>	1 (one unit)	
humidity value use appropriate humidifying system i.e. for any air temperature above dew point temperature, relative humidity values should be adjustable between minimum value of relative humidity at that air temperature (Without dehumidification) to the maximum achievable value i.e. 98 %).		
Cutput Temperature Range: -20 to +65 degree C.		
Control: Independent PID based control system with data logging and data retrieval options. Temperature Sensors (for AHU air out): PT100 or similar best (2 sensors); Relative Humidity Sensors (for AHU air out): Capacitive type (2 sensors); Temperature Sensor Accuracy: ± 0.2 degree C; Relative Humidity Sensor Accuracy: ± 2 % RH; Logging rate for all sensors: 1 sec to 18 hours; Memory - 65000 measurements (minimum) for each sensor.		
<ul> <li>Refrigeration Unit: 5.5 Ton or appropriate size, Single stage/Cascade compressor (Preferably: Emerson or Danfoss make), accessible for repairing, low noise level, less power consumption, less vibrations, designed for extremely high ambient conditions, full warranty (minimum 5 years) for compressor.</li> <li>Options for both fresh air and recirculated air.</li> </ul>		
<ul> <li>Options for both fresh air and recirculated air.</li> <li>Quote rates for 1 year complete warranty for customized air</li> </ul>		

		14/15
handling unit.  Special Note: All required PCC work / site cleaning / levelling / earthwork will be done by the buyer.	,	
2) PID sensor system with display, data logging and data		
retrieval options	1 (	
<ul> <li>Independent PID sensor system for air temperature, air relative humidity and air velocity sensors (Temperature and Humidity sensors with appropriate shield system for protection against Sunrays and water foggers - 5 sensors each of Temp. &amp; RH; best quality hot wire anemometer type velocity sensors without shield - 3 sensors) which are used for monitoring air temperature, RH and velocity in the test chamber. Velocity sensors will also be used in pipe system for air velocity measurement. Total 13 sensors and data logging and retrieval system.</li> <li>Temperature Accuracy: ± 0.2 degree Celsius</li> <li>Relative Humidity Accuracy: ± 2 % RH</li> <li>Velocity Accuracy: 0.1 m/s</li> <li>Cable length for each sensor: 10 m</li> <li>Logging rate: 1 sec to 18 hours, Memory- 65000 measurements (minimum) for each sensor.</li> <li>Quote rates for 1 year complete warranty for entire PID sensor system. The warranty should extend to all the sensors for their</li> </ul>	1 (one unit)	
optimum performance.  3) Test Chamber for testing sun / water foggers / air	·	
velocity effects.	1 (one	
<ul> <li>Size: Internal Dimensions - 4.5 m x 3.5 m x 3.5 m (L X D X H)</li> <li>Construction: Inner SS-304 and Outer PCRC coated, with required insulation (on sides, roof and floor) to maintain the desired temperature range of -20 to +65 degree C.</li> <li>Applicable Temperature: -20 to +65 degree C.</li> <li>Applicable Relative Humidity: 10 % to 98 % RH.</li> <li>Temperature Uniformity inside the chamber: ± 1 degree Celsius</li> <li>Relative Humidity Uniformity inside the chamber: ± 5 % RH</li> <li>With option to connect to the AHU (First pipe/ main duct between AHU and test chamber with sufficient insulation). The test chamber floor should made with the water-resistant material and should have good wear and tear properties for human movements (i.e. covering material above the floor insulation) and with appropriate slope to remove water deposited on floor from water foggers. (Note: Water fogging system is not a part of the specifications for this item; hence, quote excluding water fogging system).</li> <li>Bypass flexible pipe arrangement:         This is second pipe splited from main duct (AHU to test chamber). This     </li> </ul>	unit)	
bypass flexible pipe will enter into the test chamber at about mid height of the test chamber. Inner diameter of flexible pipe should be at least 20		

cm. Two manual control valves (each one for main duct and for bypass pipe) to control the desired airflow in the bypass pipe. The portion of bypass pipe from main duct to test chamber entry point should be insulated to control the temperature between -10 to 55 degree C. In chamber length of bypass pipe (without insulation) should be 5 m. The inside end of the bypass pipe (i.e. the end inside the test chamber) should be fitted with honeycomb flow straightener arrangement to get reasonably constant air speed at that end. Provision to detach bypass pipe when it is not in use. When bypass pipe port/hole in test chamber is not in use (i.e. bypass pipe is detached), bypass pipe entry port/hole should be closed with sufficient insulation and appropriate lids so that desired environmental condition can be maintained in the test chamber i.e. -20 to 65 degree C & 10 to 98 % RH.

- Arrangement for "Recirculation of Air" is required from outlet of test chamber to inlet of AHU with the required length. Fiberglass or similar insulation cover to be provided on the pipe to maintain the temperature at least 0 to 55 degree C in the pipe. The pipe should capable to handle maximum airflow of 4500 CFM.
- > Provision for general light illumination in the test chamber is required with on-off options.
- Two additional/extra ports/holes (each about diameter of 50 mm) should be provided in the test chamber for wires of PID sensor system & for water pipe, with provision to close with sufficient insulation & appropriate lids when not in use.
- > Quote rates for 1 year complete warranty on the test chamber unit.
- Special Note: Required PCC work / site cleaning / levelling / earthwork will be done by the buyer.

Instructions / Notes applicable for all equipments: The intending supplier should quote the rates inclusive of all taxes, duties, transportation, packing and forwarding, installation charges including required accessories for installation, training charges, insurance etc. i.e. All "Inclusive" for Dapoli location. No any extra payment will be made besides quoted rates. For each equipment, the facilities mentioned in special note will be provided by the buyer. The equipment will have to be supplied as per the specifications for the 1. Customized air handling unit; 2. PID sensor system; 3. Test chamber.

(Seal & Signature of Supplier)