# PunjabEngineering College Chandigarh Sector 12, Chandigarh 160012



E-tender document

For purchase of

**Propeller Test Rig** 

at

**Aerospace Engineering Dept.** 

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#### **SECTION I: INVITATION FOR E-TENDER**

#### FOR PURCHASE OF PROPELLER TEST RIG

- 1. The Punjab Engineering College, Chandigarh invites e-bids from eligible bidders for supply of the PROPELLER TEST RIG as per Table-1
- 2. Interested eligible Bidders may obtain further information from Aerospace Engineering Department, Punjab Engineering College, Sector 12, Chandigarh 160012, India.
- 3. The bidding document can be downloadable from institute website http://www.pec.ac.in.
- 4. All bids must be accompanied by anEMDas specified in the bid document and must be delivered to the office address mentioned below by the date and time indicated below.
- 5. Bids will be opened in the presence of Bidders' representatives who choose to attend on the specified date and time.

#### TABLE - 1

S. No.	Name of the Equipment	EMD	Performance Security	
			Deposit	
1	PROPELLER TEST RIG	15,000	@ 2% of the total value	
			of the contract	

#### **TABLE-2 Time Schedule**

TABLE-2 Time Schedule			
I	Date of publication		
I	Downloading of e-tender document	Start date:18.10.19	
		End date: 08.11.19	
III	Date of submission of e-tender	Start date: 18.10.19	
		End date: 08.11.19	
IV	Physical submission of EMD and other	Start date: 18.10.19	
	necessary pre-qualification documents	End date: 08.11.19	
	(scanned copies)		
V	Opening of Technical Bid (online) and	Date: 11.11.19; 11 AM	
	meeting for scrutiny of technical bid and		
	declaring eligible bidders.		
VI	Opening of Financial Bid of only eligible	To be informed after checking eligibility	
	technically qualified bidder as determined by	of Bidders	
	the Committee.		
VII	Place of opening of bids	Dept. of Aerospace. Engineering,	
		Punjab Engineering College,	
		Sector 12, Chandigarh 160012	
VIII	Address for communication	Head,	
		Aerospace Engineering Department	
		Punjab Engineering College,	
		Sector 12, Chandigarh 160012	

### **Important Notes:**

I.	Bidders shall have to submit their bids on-line in Electronic Format with Digital
	Signatures.
II.	All terms and conditions, instructions to bidder regarding e-tendering process etc. may kindly be seen from the Detailed Notice Inviting Tender (DNIT) available on
	Chandigarh Administration website (http://etenders.chd.nic.in ) or on the Punjab
	Engineering College institute website ( www.pec.ac.in).
	The bidder has to submit the original documents in physical form such as EMD, &
III.	affidavit of non being black listed on the date fixed for the same as above. The
	failure will entail summarily rejection of its tender.
	The undersigned reserves the rights to reject or accept any or all tenders without
IV.	assigning any reasons.

Director,

Punjab Engineering College, Sector-12, Chandigarh

### PUNJAB ENGINEERING COLLEGE, CHANDIGARH SECTION II TERMS AND CONDITIONS OF CONTRACT

- 1. Tenderers are advised to study all technical and commercial aspects, instructions, forms, terms and specifications carefully in the tender document. Failure to furnish all information required in the tender document or submission of a bid not substantially responsive to the tender document in every respect will be at the tenderers risk and may result in the rejection of the bid.
- 2. The tenderer should indicate specifically the Basic Price, Taxes/Excise duty, other duties (if any) and levies chargeable. No additional information will be entertained after due date.
- 3. The tenderers should give their quote in Indian currency only keeping in mind that our institute (i.e. Punjab Engineering College) is exempted from the payment of custom and excise duty. Only custom & excise duty exemption certificate will be issued.
- 4. The Bidders shall have to submit their Bids online in Electronic Format with Digital Signatures. For participation in the e-tendering process, the Bidders need to register themselves on http://etenders.chd.nic.in/nicgep. On registration, they will be provided with a user ID and a system generated password enabling them to submit their Bids online using Digital System Certificates (DSC).
- 5. Tenders without digital signatures will not be accepted by the Electronic Tendering System. No Tender will be accepted in physical form and in case, it has been submitted in the physical form only, it shall be rejected out rightly.
- **6.** Bids will be opened online as per time schedule mentioned in e-tender notice (**SECTION I Table 2**).
- 7. Before submission of online bids, bidders must ensure that self-attested scanned copies of all the necessary documents as mentioned in SECTION III "Technical Bid" and SECTION V "Financial Bid" of this tender document have been uploaded with the bid, failing which their bids may be out-rightly rejected and will not be considered.
- 8. It is mandatory for all the bidders to upload all the documents mentioned under tender document.
- 9. Bidderis required to upload scanned copy of EMD as specified in the tender documents and send original along with other hard copies of desired documents to be sent in technical bid envelope.
- 10. The details of EMD and tender cost specified in the tender documents should be the same as submitted online (scanned copies) otherwise tender will be rejected.
- 11. The conditional bids shall not be considered and may be rejected out rightly in very first instance.
- 12. The financial bids through e-tendering of only those bidders shall be opened who will qualify in the technical bid criteria.
- 13. An affidavit as per specimen enclosed as Annexure 2.2 of SECTION II should accompany the tender. The tenderer who has been black-listed or his/her tenders have ever been cancelled or any legal proceedings have ever been initiated/pending or any penalty has ever been levied on account of delay or non-completion of supply order by any State/UT/Central Government, his/her tender will be out rightly rejected. A scanned copy of affidavit shall be uploaded online and in physical form along with EMD.
- 14. Downloading and submission of Tender will be done by E-tendering process through the online website of Chandigarh Administration <a href="http://etenders.chd.nic.in/nicgep">http://etenders.chd.nic.in/nicgep</a>.
- 15. EARNEST MONEY DEPOSIT (EMD): The Tender should be accompanied with Earnest Money as mentioned in the Table-1 of SECTION I to be paid in the shape of A/C payee demand draft/banker cheque/FDR/bank gurantee from any Commercial Bank in favor of Director, Punjab Engineering College Chandigarh which shall be valid for 180 days. No firm/tenderer will be exempted from submission of EMD. The EMD deposited by the tenderer in respect of another similar tender will not be considered against this tender. Apart from

- submission of EMD in physical form, scanned copy of EMD duly attested and countersigned by the firms shall also be uploaded. The EMD of unsuccessful tenders will be refunded immediately after finalization/allotment of tender. No interest will be payable on the EMD. The EMD will be forfeited, if the tenderer withdraws his/her bid after submission of the Tender. Expression of Interest without the EMD shall be rejected.
- 16. TECHNICAL BID: The tenderer should submit scanned copy of documentary proof of his/her eligibility as mentioned in SECTION III"Technical Bid" of this tender document.
- 17. Financial Bid will be opened of only those bidders who qualify in the technical bid criteria through e-tendering process.
- 18. FINANCIAL BID: The financial bid (SECTION IV) shall be quoted by the bidder through e-tendering. The financial bid should contain rates only. The rates should be mentioned both in figures as well as in words. Any change in rate quoted by the tenderer afterwards will entail forfeiture of earnest money deposit, cancellation of tender and blacklisting of the firm.
- 19. The bid should not contain corrections or over writing.
- 20. Performance Security Deposit: The successful tenderer will have to deposit performance security @5% of the total value of tender awarded (Table -1 of SECTION I) within 15 days of issuance of letter of intent by the competent authority to be paid in the shape of bank guaranty, from any scheduled bank in favour of Director, Punjab Engineering College Chandigarh and the security deposited in connection with any other similar tender will not be considered against this tender. Thereafter, the work order will be issued. If successful tenderer fails to submit the requisite performance security deposit within prescribed 15 days, earnest money deposit (EMD) deposited by the tenderer will be forfeited.
- 21. Tender received through e-tendering shall be opened online by the committee duly constituted by the authorities of Punjab Engineering College, as per schedule given in Tender Notice in the office of the Head, Aerospace Engineering Department, Punjab Engineering College Chandigarh. In the event of date of opening of Tender being declared a holiday, the due date of opening of the Tender will be the next working day at the same hours.
- 22. Tender is nontransferable.
- 23. The bidder shall submit the hard copy of e-tender along with forwarding letter (Annexure 2.1 of SECTION II) duly signed by the authorized signatory.
- 24. The Director, Punjab Engineering College Chandigarh reserves the right to accept or reject any or all tenders without assigning any reason.

From	
Cubicate Cubmission of Tandon for Dunchage of Droppy y En	Trom Dro
<b>Subject: Submission of Tender for Purchase of Propeller</b> Dear Sir,	TEST RIG.
With reference to your above-mentioned notice inviting tender PROPELLER TEST RIG for Punjab Engineering College, Chandiga	· · · · · · · · · · · · · · · · · · ·
I/We shall supply the Equipment's truly and faithfully as set the tender document. I/We shall be responsible for all comproduct and in case of any dispute; the decision of the Direction Chandigarh shall be final and binding on me/us.  A FDR NoDateddrawn onfor the prescribed amount of Rs	plaints as regards to the quality of ector, Punjab Engineering College intended
Engineering College, Chandigarh, payable at Chandigarh is ence I/WE shall have no claim to the refund of earnest money / perfethis tender in the event of my/our non-compliance of the complemented within the period of validity of my/our tender. I/We further understand that my/our earnest money shall standard supply of equipment's/service/violation of any term, or if I/V stage during the period of validity. My/Our tender shall remain the last date prescribed for submission of the tender against the tender along with terms and conditions with relevant columns my/our attestation and with each page of the tender paper conditions signed by me/us (in the capacity of sole owner/gen submitted for your favorable consideration.  I/We have read the terms and conditions carefully and have absolute and unqualified acceptance.	Only) in favor of Director, Punjablesed as earnest money as desired. Formance security prescribed against contract, provided such contract is different of the
Thanking you,	
Place	Yours faithfully,
	Signatures Date with stamp & Full Address

#### **ANNEXURE - 2.2**

(To be furnished on non-judicial stamp paper duly attested by the 1st Class Magistrate or Notary Public)

#### **AFFIDAVIT**

I/We/M/s	are registered Company/Ltd
I/We/M/sCompany etc. as per Registration Certificate No	issued
byhaving registered office at	
do hereby decla	
have not been Black-listed, nor mine/our Tenders have	•
State/UT/Central Government or any partner or shareholder eithe	•
with or has any subsisting interest in the business of my/our firm ever been initiated/pending or any penalty has ever been levied d	• • •
work/service/supply order by any State/UT/Central Government of	•
The state of the s	
Place:	DEPONENT
<u> </u>	
Dated :	
Verification	
I/We do hereby solemnly declare and affirm that the above declar	rations are true and correct to the
best of my knowledge and beliefs. No part of it is false and nothing	g has been concealed therein.
Place :	DEPONENT
	, -
Dated:	

#### **SECTION III Technical Bid**

#### SCHEDULE OF REQUIREMENTS

Offer will be accepted/uploaded in two covers under Details containing:

**FIRST COVER TITLED** as "Technical Bid" should contain the Self-attested scanned copies of following with consecutive Sr. No.:-

- 1. Name of the firm/organization & address Contact person name and telephone/ Mob. No./Fax. No./ on letter pad of the company/firm.
- 2. Earnest money deposit as mentioned in Point 16 of SECTION II of this tender document.
- 3. Bidder should have a turnover of at least Rs. 15 Lakhsin each of the last three financial years i.e. 2016-17, 2017-18 and 2018-19. Copies of audited financial statements shall be attached.
- 4. Self-attested copies of PAN/TAN Card.
- 5. Certificate of acceptance of terms & condition mentioned in Section II and Section VI of Tender Document.
- 6. Registration Certificate of the company issued by the competent authority
- 7. Affidavit of not being Black Listed (Affidavit as per Annexure 2.2 of SECTION II)
- 8. The bidder should provide service support center at PEC Chandigarh.
- 9. Covering letter (Annexure 2.1 of SECTION II)

NOTE: All the above mentioned documents should be duly in order and are essential to qualify at Technical Bid Stage.

### **Table 3: Technical Specifications and details**

### **PROPELLER TEST RIG Specifications:**

### List of Components and its Specifications

S.No.	Component	Specifications
1	Brushless DC	KV:90
	Motor	Max. RPM: 4000
		Max Voltage: 44.4 V DC (12s battery equivalent)
		Max. current: 32 Amps
		Max. power consumption: 1500 W
		Max. Torque: 3 Nm
2	Electronic Speed	Compatible with the BLDC motor (Component-1)
	Controller (ESC)	Continuous current Max.: 60 Amps
3	Propeller	Compatible with the BLDC motor (Component-1)
	_	Material: Carbon Fiber composite
		Diameter: 30 inches (minimum)
		Pitch: 9 inch (minimum)
	10.10	Thrust class: 300 N
		Geometry: foldable propeller type
4 DC power supply Branded Modular DC Power supply com		Branded Modular DC Power supply compatible with ESC
		(Component-2)
		DC Voltage Max.: 48V
		DC Current Max.: 0-60 Amps (minimum)
		Ripple Voltage: 500 mVp-p
5	DC Servo motor	DC 48V
		Torque: 3Nm (Max.)
6	RPM sensor	Hall effect switch
		Input voltage: 5 VDC
		Output ON voltage: 3-5 VDC
		Output OFF Voltage: 0.25 to 0.5 VDC
		Raise time: 50 – 100 Micro seconds
7	Load cell	2-component load cell to measure thrust and torque.
		Compatible with the thrust & torque range of the propeller
		(125% propeller thrust & torque)
		Sensitivity: 0.01% FS

#### **SECTION IV**

#### FINANCIAL BID

#### SECOND COVER TITLED AS "FINANCIAL BID" CONSIST OF

Financial (Price) Bid for Purchase of PROPELLER TEST RIG to be delivered by the bidder in the Aerospace Engineering Department, Punjab Engineering College, Sector 12, is to be submitted online in excel sheet provided.

#### **Notes:**

- 1. Rate should be quoted in Indian Rupees only inclusive of Taxes/Levies as per Indian law except custom duty/excise duty.
- 2. The Institute is registered with the Deptt. of Scientific& Industrial Research(DSIR) for purpose of availing custom duty exemption in terms of Govt. Notification no. 51/96-Customs dated 23.07.1996 and Central Excise Duty Exemption in terms of Govt. notification no. 10/97- Central Excise dated 01-03-1997 as amended from time to time.

#### **SECTION V**

#### GENERAL TERMS AND CONDITIONS

#### 1. Clarification of Bidding Documents

A prospective Bidder requiring any clarification of the bidding documents may notify the PEC in writing or by telex or cable or fax at the PEC's mailing address indicated in the Invitation for Bids. The PEC will respond in writing to any request for clarification of the bidding documents which it receives no later than 15 days prior to the deadline for submission of bids prescribed by the PEC.

#### 2. Amendment of Bidding Documents

At any time prior to the deadline for submission of bids, the PEC may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by amendment.

In order to allow prospective bidders reasonable time in which to take the amendment into account in preparing their bids, the PEC, at its discretion, may extend the deadline for the submission of bids.

#### 3. Language of Bid

The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the PEC, shall be written in English language. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation of the relevant passages in the English language in which case, for purposes of interpretation of the Bid, the translation shall govern.

#### 4. Period of Validity of Bids

Bids shall remain valid for 120 days after the deadline for submission of bids prescribed by the PEC. A bid valid for a shorter period shall be rejected by the PEC as non-responsive.

#### 5. Opening of Bids by the PEC

The PEC will open all bids, in the presence of Bidders' representatives who choose to attend, at **11:00AM on 06.07.18** and in the following location:

Dept. of Aerospace Engineering Punjab Engineering College, Sector 12 Chandigarh 160012

The Bidders' representatives who are present shall sign a register evidencing their attendance. In the event of date of opening of Tender being declared a holiday, the due date of opening of the Tender will be the next working day at the same hours and venue..

#### 6. Warranty

The entire system shall be in warranty (from OEM) for a period of Three year from complete commissioning & handing over the system.

#### 7. Payment

- Payment for Goods and Services shall be made in Indian Rupees only as follows:
  - 1. On Final Acceptance
  - 2. 100 percent of the Contract Price shall be paid on the Successful Installation, Training and Satisfactory performance
- The Supplier's request(s) for payment shall be made to the PEC in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and the Services performed, and by documents, submitted and upon fulfillment of other obligations stipulated in the contract.
- Payments shall be made promptly by the PEC

- Payment shall be made in Indian Rupees only.
- No advance payment will be made. Payment will be released after satisfactory receipt of goods/ material, demonstration/training and installation

#### 8. Documents comprising the Bids

The Bids prepared by the Tenderers shall comprise of following components:

- Bid to be furnished as per the format for technical specifications.
- Technical literature for each product/service, covering full technical specifications.
- Bid prices should be quoted item wise as per format provided in excel sheet only duly signed and complete as per the format.
- Maximum educational discount as could be offered should be mentioned.

#### 10. Others Terms and Conditions

- An EMD/ bid security of equipment should be submitted in form A/C payee demand draft/banker cheque /FDR/bank guarantee from any Commercial Bankvalid for 180 days from any commercial bank in favour of Director Punjab Engineering College, Chandigarh. Tender without earnest money shall be considered unresponsive and rejected.
- A Performance security of 5% of the cost of the equipment will have to be deposited by the successful bidder awarded the supply order in form of Bank Guarantee from a scheduled bank which should be valid for 180 days beyond the completion of warranty/contract period.
- Performance Security will be forfeited and credited to the institute (Punjab Engineering College, Chandigarh) in the event the supplier does not honour the warranty/contract and other terms and conditions of the tender.
- Price quoted should be inclusive of Taxes/Levies as per Indian law except custom duty/excise duty.
- TheInstitute is registered with the Deptt. Of Scientific & Industrial Research(DSIR) for purpose of availing custom duty exemption in terms of Govt. Notification no. 51/96-customs dated 23.07.1996 and Central Excise Duty Exemption in terms of Govt. notification no. 10/97- Central Excise dated 01-03-1997 as amended from time to time.
- The delivery period for supply of the material is 60 days from the date of supply order. The penalty will be charged @ 0.5% of cost of equipment per week after the expiry of delivery period, mentioned in the purchase order if delivery date is extended by the PEC.
- Detailed Catalogue should be sent along with supply of equipment.
- All legal disputes will be subject to Chandigarh Jurisdiction and will be interpreted under Indian Laws.
- The Director Punjab Engineering College reserves to himself the right to reject any or all tenders without assigning any reasons.
- The firm who has been blacklisted by Centre/State Govt/UT/Boards/Corporations/any government authority/Punjab Engineering College are not eligible for the Tender.
- All the rates will be FOR, Punjab Engineering College, Chandigarh.
- The institute being a premier Education and Research Institute funded by Chandigarh Administration, discounts as applicable to Research Institute/Educational Institutes may be provided in the Tender.
- The bidders shall not be allowed to change, alter or modify the bids after expiry of the deadlines for the receipts of bids.

- The firm is entirely responsible for any damage or losses occurred to the material in the transit. The firm will lodge all complaints regarding the damage occurred in the transit and shall bear all expenses.
- In a tender, either Indian agent on behalf of the Principal/(Original Equipment Manufacturer) OEM or Principal/OEM itself can bid but both cannot bid simultaneously for the same tender for the same item/ product.
- EMD/Performance security will stand forfeited if a bidder withdraws its bid during the period of bid validity specified by the bidder on the bid form (SECTION VI), and in case of successful bidder, if the bidder fails to supply the equipment or to furnish performance security in accordance with the tender.
- Bids received after the due date will not be considered.
- The tenderer is required to bring their own testing and measurement instruments which are required for the installation, commissioning and testing. These can be taken back after completion of the process.
- In case, any free gift scheme / cash scheme is launched by the company same will be offered by the vender to Punjab Engineering College, Chandigarh free of cost.
- Generally the bid offer will be received /opened on the day as specified in the schedule. If the scheduled date is declared as a holiday, then the tender shall be received / opened on the next working day at the same time.
- The agency shall arrange to provide demonstration/Training to the concerned lab staff regarding operation / maintenance of equipment free of cost.
- A technical compliance chart of the quoted product mentioning technical specifications of quoted product verses asked specifications is compulsory. Attach the compliance chart with technical bid.
- Tender validity should be 120 days from the opening of tender.

All the terms and Conditions of this tender document are acceptable to me /us.

Signature of Bidder

### PERFORMANCE SECURITY FORM

## (on Non-Judicial Paper)

### BANK GUARANTEE BOND FOR PERFORMANCE WARRANTY

To	
Punjab I	sident of India, through the Director Engineering College, Sector- ndigarh-160012
Dear Si	·,
Sub:	
1.	You, on behalf of President of India, have entered into a contract with reference No.  with (herewith after referred to "as the contractor") for the development, fabrication and supply of (herein after referred
2.	to as stores) for the price and on the terms and conditions contained in the said contract.  In accordance with the terms of said contract the Contractor has undertaken to produce a Bank Guarantee for Rs
3.	In consideration thereof, we happily expressly, irrevocably and unconditionally undertake and guarantee as principal obligors on behalf of the contractor that in the event that the President of India submits a written demand to us that the contractor has not performed according to the contractual obligations included in the said contract, we will pay you on the written demand, without demur and without reference to the contractor any sum up to a maximum amount of
	Rs
4.	This guarantee shall not be revoked without your express consent and shall not be affected by your granting any indulgence to the contractor, which shall include but not be limited to postponement from time to time of the exercise the same in any manner at any time and either to forbear or to enforce any covenant continued or implied in the said contract or any other course remedy or security available to you, and our Bank shall not be released from its obligations under this guarantee by your exercising any of your rights with reference to matters aforesaid or any of them or by reason of any other indulgence shown by you or by any other matter or thing whatsoever which under law would, but for this provision, have the
5.	effect of relieving our bank from its obligation under this guarantee.  Not withstanding anything herein contained, our liability under this guarantee is restricted to Rs

	rights under this guarantee shall be prescribed and we shall hereunder.	ll be discharge from the	liabilities
7.	. This guarantee shall not be affected by any change in the the contractor or for any other reason whatsoever.	e constitutions of our E	ank or of
	We, Lastly undertake not to a scurrency except with the prior consent from your office in wr		uring
No	Not with standing anything contained herein:		
i.	Our liability under this Bank Guarantee shall not ex (Rupees.		_
ii.	. This Bank Guarantee shall be valid upto	·	
iii.	i. We are liable to pay the guaranteed amount or an Guarantee only and only if you serve upon us a written	* *	
issuan Origin	This Bank Guarantee shall be returned to our Note that Office Add note has been fulfilled or upon expiry of this guarantee whimal Bank Guarantee is essential for invoking the guarantee eneficiary.	ress, once the purpose chever is earlier. Even	return of
Wittne	ness:,Signature		
Wittne	ness:,Signature		
For	Bank	Forl	Bank
Autho	orized Signatory	Authorized Sign	atory

6. Unless a demand or claim under this guarantee is made on us in writing on or before the aforesaid expiry date as provided above or unless this guarantee is extended by us all your