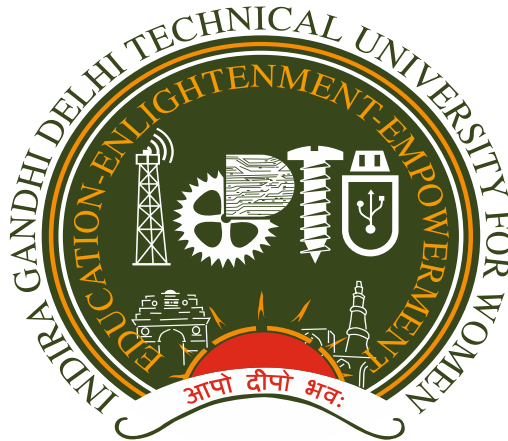


**TENDER FOR SUPPLY AND INSTALLATION OF
SINGLE CYLINDER FOUR STROKE (MULTI FUEL)
VCR ENGINE IN MAE DEPARTMENT AT IGDTUW
KASHMERE GATE, DELHI - 110 006.**

(MAE/06/IGDTUW/PURCHASE OF CYLINDER/2021-22)



**Registrar
INDIRA GANDHI DELHI TECHNICAL UNIVERSITY FOR
WOMEN**

**(Established by Govt. of NCT of Delhi under Act 9 of 2012)
Kashmere Gate, Delhi-110006**

e-mail: registrar@igdtuw.ac.in; www.igdtuw.ac.in

1. INVITATION FOR BIDS:

Indira Gandhi Delhi Technical University for Women (IGDTUW), Delhi, a State University created by an Act of Govt. of NCT of Delhi, invites e-Tender/bid from eligible suppliers (i.e. Manufacturers or their Authorized Distributors/Dealer) for Supply and Installation of Single Cylinder Four Stroke (Multi Fuel) VCR Engine as per specifications mentioned under Scope of Work below in two-packet bids system through 'e'-procurement solution only as per the guidelines and terms & conditions given in tender document - details of the NIT along with terms & conditions, specifications etc. can be seen or/and downloaded from the website.

The interested tenderers should upload duly signed tender form and their bids along with scanned copies of all the relevant certificates, documents etc. in support of their technical & price bids – all duly signed - on the: <https://govtprocurement.delhi.gov.in>. latest by 29.02.2024 at 2:30 P.M. An index prepared after pagination of all documents may also be uploaded. The technical bids will be opened online on 29.02.2024 at 3:00 P.M in the presence of the bidders who wish to be present and will also be displayed on the website.

For participation in the tender through an e-procurement solution, the tenderers are required to have a digital certificate and get registered with application Service Provider NIC. Tender document is also available for viewing on the website of Indira Gandhi Delhi Technical University for Women, Delhi at www.igdtuw.ac.in

2. EARNEST MONEY DEPOSIT:

EMD 2% of Value Rs.1150000/- (i.e.23000/-) in the form of DD/BC should be submitted as bid security. EMD will be returned to the successful tenderers after receipt of the Performance Security.

3. TENDER DOCUMENT AND FEE :

The collection of cost of Tender documents is dispensed away with, as there is no physical supply of tender documents and also to have absolute anonymity of bidder participating in e-procurement solution. The bidders can view/download the tender documents from the: <https://govtprocurement.delhi.gov.in> or www.igdtuw.ac.in

4. SUBMISSION OF BIDS:

The bidders who are desirous of participating in 'e'- procurement shall submit their price bids in the standard formats prescribed in the Tender documents, displayed at: <https://govtprocurement.delhi.gov.in>.

The bidder should upload the scanned copies of all the statements, documents, relevant certificates, documents etc. in the: <https://govtprocurement.delhi.gov.in> with support of their price bids.

5. PRICE BID OPENING:

The Price Bids of only technically qualified bidders (whose bids satisfy the prescribed technical specifications/parameters and have also submitted all requisitioned documents etc.) will be opened online at the specified date & time and will subsequently be evaluated to determine the lowest bidder.

The result will be displayed on the: <https://govtprocurement.delhi.gov.in>. which can be seen by all the bidders who participated in the tenders. There shall not be any negotiation normally. However, in exceptional cases, negotiations can be held with the lowest evaluated responsive bidder only. Counteroffers are tantamount to negotiations and shall be treated at par with negotiations.

6. PROCESSING OF TENDERS:

The concerned officer/officers will evaluate and process the tenders as done in the conventional tenders and will communicate the decision to the bidder online.

7. PAYMENT OF PERFORMANCE SECURITY:

The successful tenderer shall furnish a Bank Guarantee/FDR of the value of 3% of the basic cost Rs.1150000/- (i.e.34500/-) of the item for 60 days beyond the warranty period from a nationalized bank to ensure the satisfactory performance of the item supplied. The performance guarantee is to be submitted at the time of installation/demonstration of equipments. In case the performance of the item is not found satisfactory, the amount of Performance Security will be forfeited & credited to the university account.

8. PARTICIPATION OF BIDDERS AT THE TIME OF OPENING OF BIDS:

Bidders have two options to participate in tendering process at the time of Opening of Bids:

- Bidders can come at the place of opening bids (electronically) as done in the conventional tender process.
- Bidders can visualize the process online.

9. PARTICIPATION FINANCIAL RULES FOR E-PROCUREMENT:

The e-procurement system would be applicable for the purchase of goods, outsourcing of services, and execution of work as prescribed in GFRs.

10. DATE OF SUBMISSION OF BID:

The last date for submission of bid is 29.02.2024 at 2:30 P.M The Technical Bids shall be opened on the same day i.e. 29.02.2024 at 3:00 P.M. The Financial Bid will be opened after evaluation of the Technical Bid. A financial bid of only those meeting the requirement of the University will be opened and no representation in this regard will be entertained.

The date, time of opening of the Financial Bid will be communicated later. The Tender document should be addressed to **Registrar, Indira Gandhi Delhi Technical University for Women, Delhi-110 006.**

Yours faithfully,
S/d
**Registrar,
IGDTUW, Delhi**

(TO BE SUBMITTED ALONG WITH TECHNICAL BID)

TENDER NOTIFICATION NO: -----

UNDERTAKING

TO,
THE REGISTRAR,
INDIRA GANDHI DELHI TECHNICAL UNIVERSITY FOR WOMEN,
KASHMERE GATE,
DELHI-110 006.

We the undersigned (hereinafter called as Contractor/Vendors/Suppliers) hereby offer to execute the supply of items as per specification against which we have quoted over rates and for which this tender may be accepted at the rates stated therein and subject to the terms & conditions set forth for such items as may be ordered by the Registrar, IGDTUW or officer acting on his behalf.

Date this _____
Day of _____

Signature **of** **Contractor**

Address _____

SCOPE OF WORK (PART-A)
[Technical Compliance Statement]

(To be submitted in Technical Bid on the Company Letter Head)

	EMD Amount: (Rs.23000/-) EMD should be submitted and uploaded accordingly	Unit price in figure (inclusive of all taxes: (Rs.11,50,000/-)	Unit price in words (inclusive of all taxes): Rupees
4.	<p>Single Cylinder Four Stroke (Multi-Fuel) VCR Engine Qty. 01</p> <p>The setup should consist of single cylinder, four stroke, VCR (Variable Compression Ratio) engine connected to eddy current dynamometer. It should be provided with necessary instruments for combustion pressure, crank-angle, airflow, fuel flow, temperatures and load measurements. These signals should interface to computer through high speed data acquisition device. The set up shall have a stand-alone panel box consisting of air box, twin fuel tank, manometer, fuel measuring unit, transmitters for air and fuel flow measurements, process indicator and piezo powering unit. Rota meter should be provided for engine cooling water flow measurement. It should be possible to change the compression ratio without stopping the engine and without changing the compression chamber geometry by specially designed tilting cylinder block arrangement.</p> <p>In petrol mode engine shall work with programmable Open ECU, Throttle position sensor (TPS), fuel pump, ignition coil, fuel spray nozzle, trigger sensor etc.</p> <p>The setup shall enable study of VCR engine performance for both Diesel and Petrol mode. Engine performance study should include brake power, indicated power, frictional power, BMEP, IMEP, brake thermal efficiency, indicated thermal efficiency, Mechanical efficiency, volumetric efficiency, specific fuel consumption, Air fuel ratio, heat balance and combustion analysis.</p> <p>The set up should have the following features</p> <ol style="list-style-type: none"> 1. Changing of CR without stopping the engine 2. Study of open ECU and Performance optimization with Open ECU 3. Diesel and Petrol operation 4. Diesel injection point advancement 5. Combustion analysis, P Θ and PV Diagram, IP, IMEP, FP indication 6. Electric start <p>Open ECU in Petrol mode features</p> <ol style="list-style-type: none"> 1. Fuel control with fuel table 2. Barometric Pressure, Acceleration, Deceleration, Battery, Air Temp, Coolant Temp and Starting compensations 3. Adjustable injection timing control 4. Adjustable ignition control 5. Built in ignites 6. Advanced diagnostic features 7. Advanced turning software 8. Ethernet connection <p>Instrumentation: The components like Open ECU, Combustion pressure sensor, Crank angle sensor, fuel flow transmitter, Pressure transmitter, high speed data acquisition device etc. should be supplied with best quality instruments.</p> <p>Software</p> <p>The software should be Lab view based package developed for engine performance monitoring. It should serve most of the engine testing application needs including</p>		

monitoring, reporting, data entry, data logging. The software should evaluate power, efficiencies, fuel consumption and heat release. Various graphs should be obtained at different operating condition. While on line testing of the engine in RUN mode necessary signals should be scanned, stored and presented in graph. Stored data file should be accessed to view the data graphical and tabular formats. The data in excel format should be used for further analysis

System Component Details	
Engine	Single cylinder, 4 stroke, water cooled, stroke 110 mm, bore 87.5 mm, 661 cc., Diesel Mode: Power 3.5 KW, 1500 rpm, CR range 12-18 injection variation 0-25 deg BTDC, Petrol Mode: Power 4.5 KW, speed range 1200-1800 rpm, CR range 6-10
Dynamometer	Eddy current, water cooled with loading unit
Propeller shaft	With standard universal joints
Open ECU	Programmable ECU With solenoid injector driver, Calibration cable and versatile software or equivalent in petrol mode.
Common rail	With pressure sensor and pressure regulating valve
EGR	SS, Water cooled
Injector	Solenoid driven
Piezo sensor	Combustion Range 350bar with low noise cable
Crank angle sensor	Resolution 1 Deg, Speed 5500 RPM with TDC pulse with calibration certificate.
Data acquisition device	16-bit, 250kS/s or better
Temperature sensor	Type RTD, PT100 and Thermocouple, Type K with calibration certificate.
Temperature Transmitter	Type two wire, Input RTD PT100, Range 0–100 Deg C, Output 4–20 mA and Type two wire, Input Thermocouple C
Load sensor	Load cell, type strain gauge, range 0-50 Kg
Fuel flow transmitter	DP transmitter, Range 0-500 mm WC
Fuel tank	Capacity 15 litre, Type: Duel compartment, with fuel metering pipe of glass
Air flow transmitter	Pressure transmitter, Range (-) 250 mm WC or better
Air box	M S fabricated with orifice meter and manometer
Software	Reputed software for engine analysis (original version in CD)
Rotameter	Engine cooling 40-400 LPH with calibration certificate
Pump	Type Monoblock
Petrol and Diesel Sample testing	50 litre each
Warranty	2 years
Installation, commissioning and training	at IGDTUW Training (at least 03 days)

Note: Tenderer should indicate “Yes, meets” OR “No, doesn’t meet” under appropriate columns in the Technical Compliance Statement.

TERMS AND CONDITIONS

1. Procedure for submission of bids: The bidders who are desirous of participating in e-procurement shall submit their technical and price bids in the standard formats prescribed in the Tender documents, displayed at <https://govtprocurement.delhi.gov.in>.
2. The bidder should upload the scanned copies of all the relevant certificates, documents etc. after page-numbering all documents and tender documents and prepare an index thereof in the: <https://govtprocurement.delhi.gov.in> in support of their price bids.
3. The bidder shall sign on all the statements, documents, certificates, uploaded by him, owning responsibility for their correctness/authenticity, and documents of the bidders downloaded online or requisitioned subsequently only will form the basis for deciding the tender.
4. Bidder should be OEM/Authorized Partner/Service Provider of the OEM. In case the bidder is an Authorized Partner or Service Provider a valid Agency-ship/Dealership Certificate (MAF specific to this tender) to quote on behalf of OEM should also be enclosed along with the technical bid. A document in support of this must be enclosed.
5. OEM/Authorized Partner should have Sales and support office in Country. A self-certified document in support of this must be enclosed.
6. OEM/Authorized Partner should have a service and support office in Delhi NCR. A self-certified document in support of this must be enclosed.
7. If the bidder is an authorized partner or service provider of an OEM, an undertaking from the OEM is required (please enclose) stating that they would facilitate the bidder regularly with technology/product updates and extends support for the warranty as well.
8. The warranty provided by the bidder should have a back-to-back arrangement with the OEM. The declaration should be part of a Letter of Authorization and signed by the competent authority at the OEM.
9. The specifications mentioned/issued with this form of tender must not be altered by the Suppliers.
10. The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish all information/documents, as asked for in the NIT, or submission of a bid not substantially responsive to the NIT in every respect, will be at the Bidder's risk and may result in rejection of its bid.
11. If the Supplier, in the opinion of the University, fails or neglects to comply with any of the terms & conditions form, part of the order issued, the head of University shall without prejudice to any other right or remedies under the contract, has the right to cancel the contract /order by giving 15 days notice in writing to the Suppliers/firms without being liable to pay compensation for such cancellation.

12. The tender shall be uploaded as per guidelines indicated for the e-procurement solution.

13. Demonstration of equipment has to be arranged by the suppliers if desired by the University. The technical committee may visit the production facility if so desired for sample verification.
14. The quotation should be valid for 90 days from the date of opening of the tender.
15. Rates are to be quoted in INR (Rupee terms) only and any revision thereof is not allowed after the tenders have been opened.
16. Bidder will quote the rates as per financial bid at page 13 and payment will be release 100% of only after successful installation, commencing and training of the product.
17. The delivery period should be mentioned against each item, in case, the items are not readily available, an ex-stock offer will be preferred.
18. The consignment will not be insured at the University Cost.
19. The payment will be made within 30 days after the successful demonstration/ installation of the equipment and fulfilling of other obligations (like training etc., if any) as per the purchase/work order, against a Bill/Invoice; containing therein details of goods delivered/services performed.
20. Rejected items/goods should also be removed within 30 days after which no responsibility will be accepted by University.
21. Conditional quotations and/or incomplete quotations in any respect will be rejected.
22. In case you cannot quote for one or more of the items asked for in the tender the word "NOT QUOTED" (in the rate column) should be indicated.
23. The specification of the item quoted by the firm should confirm the University specifications. Confirmation, in this respect, should be specifically mentioned in the tender. Where the tenderer feels that the specification of the item is not fully given or differs, from the specification of the item mentioned by the university, the exact specification of such item should be attached with the tender indicating the item quoted.
24. The Firm is required to link the University specifications with catalogs & leaflets/ literature and also mention Make and the Model for each item. Detailed features, for compliance of specification, should be provided on specification sheet & appropriate reference i.e. page no. & para of literature, leaflet wherefrom the relevant information has been checked, should be indicated.
25. The Purchase Order/Contract will be awarded to the successful Bidder whose bid has been determined to be responsive and has been determined to be the lowest evaluated bid, provided further the Bidder is determined to be qualified to execute the Order/Contract satisfactorily.
26. There shall not be any negotiation normally. However, in exceptional cases, negotiations can be held with the lowest evaluated responsive bidder only. Counteroffers are tantamount to negotiations and shall be treated at par with negotiations.
27. The Competent Authority reserves the right to reject any or all the tenders and annual the bidding process at any time before award of Contract, without assigning any reason, without thereby incurring any liability to the affected Bidder or Bidders, and his decision will be final.
28. The supplies shall have to be made within the period specified in the purchase order failing which the order shall be cancelled. However, in

exceptional circumstances and, on written request, from the supplier/tenderer, an extension of the date for supply of the material will be considered. Extension in the supply period is at the sole discretion of the competent authority.

29. Service manuals, wherever available/ required, should be provided along with the Equipment.
30. Product(s) must have a minimum of Two Year Warranty. A Warranty Certificate should invariably be supplied along with the item at the time of delivery. If after delivery, acceptance, and installation and within the guarantee and warranty period, the operation or use of the goods proves to be unsatisfactory, the supplier shall rectify the defects, errors, or omissions by repair or by partial or complete replacement on free of cost basis.
31. The Competent Authority reserves the right to levy liquidated damages up to 2% of the value of the order for delayed supply. If the supply is delayed beyond the extended period, the University reserves the right even to cancel the order.
32. The successful tenderer shall furnish a Performance Security Deposit of the value of 03% of the basic cost of the item in the shape of Bank Guarantee/FDR/DD from a nationalized bank pledged to Registrar, IGDTUW, for 60 days beyond the warranty period to ensure the satisfactory performance of item supplied.
33. The performance guarantee is to be submitted within 15 days of award of the Supply/Work Order. In case the performance of the item is not found satisfactory and/or the Supplier fails to complete its obligation under the contract/purchase order, the amount of Performance Security will be credited to the University account.
34. In the event of default and unsatisfactory service of the contractor/Supplier firm, the IGDTUW will be at liberty to repair/get the item serviced from other parties at the cost of the supplier/ contractor/ tenderer.
35. In the case of software items, the suppliers should ensure that:-
 - Legal software is supplied in original sealed pouches / P. K. T.
 - A license agreement is enclosed with it.
 - A registration card is available for software.
36. If the Contractor / Supplier fails to deliver the stores or any instalment thereof within the period fixed for such delivery or at any time repudiates the contract before the expiry of such period, IGDTUW may without prejudice to the right of the purchaser recover damages for breach of the contract.
37. The technical & financial bids of only those bidders will be opened who fulfill the eligibility criteria and whose documents are found in order. If any of the dates earmarked for the opening of technical or financial bids happens to be a holiday, the bids will be opened on the very next working day.
38. Notwithstanding the provisions relating to the extension of time, penalty, and cancellation of tender/contract for default, the vendor shall not be liable for forfeiture of its performance security/ liquidated damages or termination for default, if and to the extent that, its delay in performance or other failures to perform its obligations under the contract is the result of an event of Force Majeure (i.e. an event or situation beyond the control of the vendor that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the vendor; such as wars or revolutions, fires, floods,

- epidemics, quarantine restrictions, and freight embargoes, etc.). If the performance in whole or in part or any obligation under the contract is prevented or delayed by any reason of force-majeure for a period exceeding 60 days, either party may at its option terminate the contract by sending a written notice without any financial repercussions on either side.
39. For any query/clarification in the r/o technical aspect of the enquiry, HoD, MAE Department, IGDTUW, Delhi may be contacted.
 40. Proof of GST Registration No and GST Return copy of fourth quarter for last three financial years (2020-2021), (2021-2022) and (2022-2023) from the date of opening of the tender bid.
 41. PAN Number (Copy PAN No. Required).
 42. P. Os Copies having executed same/similar items (01 P. Os of 80 percent each or 03 P. Os of 50 percent each 05. P.Os of 30% each of estimated cost of equipment) of last 03 financial years (2020-2021), (2021-2022) and (2022-2023) from the date of opening of the tender bid.
 43. Authorization certificate from Original Equipment Manufacturer (OEM) or their Distributor to quote/sell the product, in case the bidder is not the OEM.
 44. The bidder must not be blacklisted by the Central Government, State Government, or Government of Corporations in India. A certificate or undertaking to this effect must be submitted.
 45. Bids will be opened in the presence of bidder's representatives, who choose to attend on the specified date and time. Only one representative shall be allowed to attend.
 46. Disputes, if any, arising out of this tender shall be subject to the exclusive jurisdiction of Courts of Delhi/New Delhi only.
 47. The OEM is required to submit a list of its authorized dealers, if not participating directly in the tender bid.

**CHECKLIST OF DOCUMENTS TO BE UPLOADED
FOR QUALIFYING IN TECHNICAL BID**

S. No.	Particulars of documents	Page No.	No. of pages
1	Bid Security / EMD		
2	Proof of PAN Number		
3	Proof of GST Registration No. and GST Return copy of Fourth Quarter/January to March for last three financial years (2020-2021), (2021-2022) and (2022-2023) from the date of opening of tender bid		
4	Brochure/Leaflets/Technical Information, including Make and Model, Imported/Indian of the item(s)		
5	UNDERTAKING as per Tender Document, duly signed.		
6	Technical specifications, terms and conditions and delivery period etc. to be submitted on firms letterhead		
7	Warranty Certificate from the manufacturer or their Authorized Distributors.		
8	P.Os Copies having executed same/similar items (01 P.Os of 80 % each or 03 P.Os of 50 % each or 05 P. Os of 30% each of estimated cost of equipment) of last 03 financial years (2020-2021), (2021-2022) and (2022-2023) from the date of opening of the tender bid.		
9	Authorization Certificate from Original Equipment Manufacturer(OEM) or their authorized Distributors		
10	The bidder has submitted an undertaking in firm letter pad that it has not been blacklisted by Central Government, State Government or Government of Corporations in India.		
11	The OEM is required to submit a list of its authorized dealers, if not participating directly in the tender bid.		

Note: All copies of the above documents should be duly signed and stamped by the tenderer before uploading.

Signature of Tenderer: _____

Name: _____

Name of firm: _____

Telephone No _____

PROFORMA FOR FINANCIAL BID

Sl. No.	Details/Particulars	Qty.	Rate / Cost (All-Inclusive Cost - Please quote in INR only)
1.	Supply and installation of Single Cylinder (Multi-Fuel) VCR Engine (As per Scope of Work)	01	
2.	Minimum Five Days Training for End users	--	
3.	Discount (if any)	--	
4.	Total Amount/Cost	--	

(Signature of the Authorized
Signatory)

Name:

Office Seal.

Date:

Place:

INDEX

Sl. No.	Particulars of Documents	No. of Pages
Note: Pagination must be completed properly.		