



कृषि अभियांत्रिकी संभाग  
Division of Agricultural Engineering  
भा. कृ. अनु. प. भारतीय कृषि अनुसंधान संस्थान  
ICAR-INDIAN AGRICULTURAL RESEARCH INSTITUTE  
पूसा नई दिल्ली 110012 PUSA, NEW DELHI-110012



मिसिल संख्या File No. 228-II/Project Code(24-735)/2020-21/AE दिनांक Dated: 20-10-2021

## निविदा-सूचना

On-line Tender ID : 2021\_DARE\_653524\_1

निदेशक भा. कृ. अनु. प.-भारतीय कृषि अनुसंधान संस्थान नई दिल्ली द्वारा निम्नलिखित वैज्ञानिक उपकरण / वस्तु की आपूर्ति एवं कार्य हेतु प्रतिष्ठित निर्माताओं/ अधिकृत डीलरों / आपूर्तिकर्ताओं से दो बोली प्रणाली/ (तकनीकी एवं वित्त बोली) के अन्तर्गत आनलाईन कोटेशन **Torque sensor, Load cell, BLDC Motor, Battery, Solar Pannel, Linear Actuator, Servo Motor, Stepper Motor, Motor Drivers** के लिये आमंत्रित की जाती है। Online bids are invited from reputed Manufacture/Dealer/Supplier in **Two Bid** system (Technical bid & Financial bid) for **Torque sensor, Load cell, BLDC Motor, Battery, Solar Pannel, Linear Actuator, Servo Motor, Stepper Motor, Motor Drivers** of following Scientific Equipment/Items on behalf of Director ICAR-Indian Agricultural Research Institute, New Delhi. Details of **Torque sensor, Load cell, BLDC Motor, Battery, Solar Pannel, Linear Actuator, Servo Motor, Stepper Motor, Motor Drivers** are given in the **compliance report**.

### Schedule of tender

Name of Organisationसंस्थान का नाम	ICAR-Indian Agricultural Research Institute, New Delhi-12 भा. कृ. अनु. प.- भारतीय कृषि अनुसंधान संस्थान, नई दिल्ली-12
Tender Typeनिविदा प्रकार (Open/Limited/EOI/Auction/Single/Global)	Open
Tender Categoryनिविदा श्रेणी (Services/Goods/works)	Goods
Type/Form of Contract कार्य विवरण (Work/Supply/ Auction/ Service/ Buy/ Empanelment/ Sell)	Buy
Product Categoryवस्तु/ कार्य का प्रकार (Civil Works/Electrical Works/Fleet Management/ Computer Systems)	Others
Source of Fund (Institute/Project)	Project Code: 24-735
Is Multi Currency Allowed	No
Date of Issue/Publishing प्रकाशन तिथि	20/10/2021/(16:00 Hrs)
Document Download/Sale Start Date डाउनलोड खुलने की तिथि	20/10/2021/(16:00 Hrs)
Document Download/Sale End Date डाउनलोड बंद की तिथि	10/11/2021/(15:00 Hrs)

Last Date and Time for Uploading of Bids अपलोड के लिए अन्तिम तिथि	<b>10/11/2021/(15:00 Hrs)</b>
Date and Time of Opening of Technical Bids निविदा खुलने की तिथि	<b>11/11/2021/(15:00 Hrs)</b>
EMD for item ई एम डीकी राशि	<b>Rs. Nil (Bid Security Declaration Document)</b>
Bid Validity days (180/120/90/60/30) बोली की वैधता सीमा	180 Days (From last date of opening of tender)
Address for Communication पता	Division of Agricultural Engineering ICAR-IARI New Delhi Pusa Campus, New Delhi-110012, Delhi, India
Contact No. संपर्क सूत्र	011-25842294
Email Address ईमेल पता	dd3.iari@iari.res.in, sddkushwaha@gmail.com

विस्तृत नियम व शर्तों को भा. कृ .अनु .सं. की वेबसाईट [www.iari.res.in](http://www.iari.res.in) पर देखे एवं आनलाईन के लिए [www.eprocure.gov.in](http://www.eprocure.gov.in) देखा जा सकता है। Please visit [www.iari.res.in](http://www.iari.res.in) for Details Rules and Regulation and Log on [www.eprocure.gov.in](http://www.eprocure.gov.in) for online.

**बोली लगाने के निर्देश और नियम एव निविदा की शर्तें Instruction to the bidder and terms & conditions of tender:**

1. बोलीदाता कृपया ध्यान दें कि वाणिज्य और उद्योग मंत्रालय, उद्योग और आंतरिक व्यापार को बढ़ावा देने के विभाग, सरकार के आदेश के अनुसार वरीयता "मेक इन इंडिया" को दी जाएगी। उत्पाद की तकनीकी उपयुक्तता के अधीन। Bidders may please note that Preference will be given to "Make in India" as per order of Ministry of Commerce and Industry, Department of promotion of Industry and Internal Trade, Govt. of India subject to technical suitability of the product.
2. कोटेशन में दर्शायी गई दरों में भा. कृ .अनु .सं. नई दिल्ली के संभाग कृषि अभियांत्रिकी संभाग/भारतीय कृषि अनुसंधान संस्थान, नई दिल्ली-110012 में सामान सामग्री की निः शुल्क आपूर्ति अथवा स्थापन शामिल होगा। हालाँकि विदेशी मुद्रा में दर्शाए गए उपकरण को एफ ओ बी आधार पर दर्शाया जाये। **The rates quoted shall be free of cost delivery and installation** at the Division of Agricultural Engineering, IARI, New Delhi-110012. However, equipment quoted in foreign currency must be quoted on FOB.
3. Our Institute is exempted from Custom Duty. Hence Custom Duty Exemption Certificate (CDEC) will be provided to the firm, if demanded.
4. उपरोक्त दिए गए दर में यदि किसी भी प्रकार का अतिरिक्त कर /टैक्स/ड्यूटी लगाया जाना है तो उसका संकेत स्पष्ट रूप से दिया जाना चाहिए। If taxes duties or any other charges over and above the rates quoted leviable, actual percentage of such taxes/duties/other charges should be clearly indicated.
5. इस संस्थान द्वारा निविदाकर्ता को किसी भी सुरक्षा जमा राशि पर ब्याज नहीं दिया जाएगा। No interest on security deposit shall be paid by the Institute to tenderer.

6. कोटेशन प्रक्रिया पूरी होने के पश्चात सफलतम बोलीदाता के मामले में सुरक्षा जमा के रूप में, जो कि आडर के रशि की 3 % होगी और यह डिमांड माँग ड्राफ्ट / भुक्तान आदेश / मियादी जामा रसीद / बैंक गारंटी निदेशक, भा. कृ. अ. स.नई दिल्ली 110012 के नाम किसी भी राष्ट्रीय बैंक में देय हो, जिसकी वैधता सभी कार्य को पूरा करने के 60 दिनों, उपकरण की एक वर्ष की गारंटी के साथ के साथ उपकरण / सामान/ जिसकी कीमत रु. 1.00 लाख या इससे अधिक की गारंटी होगी। हालांकि जो उपकरण रु 1.00 लाखया एक लाख से कम है उस परिस्थिति में किसी भी प्रकार का निष्पादन जमा राशि नहीं दी जाएगी। In case of the successful bidder after completion of the quotation process, in the form of security deposit amount which will be 3% of the order amount D.D/Pay Order/Fixed Deposit Receipt/Bank Guarantee from commercial bank drawn in favour of Director, IARI, payable at New Delhi and shall remain valid for 60 days beyond the date of completion of all contractual obligation of supplier including warranty obligation for the equipment/goods costing Rs. 1.00 lakhs (Rs. One Lakh) or more. Here would however, be no performance security deposit for equipment/goods costing less than Rs. 1.00 lakh (One lakh).
7. फर्म द्वारा एक वर्ष की वारंटी प्रदान की जाएगी। यदि सामान/ उपकरण के विवरण में वारंटी की अवधि में किसी भी प्रकार परिवर्तन है तो उस वारंटी को अंतिम माना जयेगा। **One year warranty** has to be invariable provided by the firm. In case, there is any variation in the warranty period given in the specification of the item/equipment, the warranty period shall be the final as given in the specification.
8. कार्य के पूरा होने के बाद फर्म / पूर्तिकता को तीन पूर्व रसीद बिल प्राप्त होने के बाद भुगतान e-payment के माध्यम से किया जाएगा।Payment will be made by mode of e-payment to the supplier/firm after satisfactory completion of work and receipt of pre-receipt bill triplicate.
9. निदेशक भारतीय कृषि अनुसंधान संस्थाननई दिल्ली110012 के पास बिना कारण बताये सभी कोटेशनो को पूर्ण या आंशिक रूप से स्वीकार या अस्वीकार करने के अधिकार रहेगा।The Director IARI, New Delhi reserves the right to accept or reject any or all the quotations either in full or in parts without assigning any reason.
10. उपरोक्त शर्तों का पालन न करने वाली क्यूटेपनों को अस्वीकार कर दिए जा सकते है।Quotations not complying with the above conditions are liable to be rejected.
11. TIN/VAT/PAN/C.S.T./GST Nos.के स्कैन कापी को कोटेशन के साथ में संलग्न किया जाए।Scanned copy of TIN/VAT/PAN/C.S.T./GST Nos may be attached with the bid.
12. किसी कारण अनुबंध में कोई विवाद उत्पन्न होने पर भारतीय कानून और न्यायालयनई दिल्ली की अधिकारिता के अधीन होगा। सचिवभारतीय कृषि अनुसंधान परिषद द्वारा एकमात्र मध्यस्थ नियुक्त किया गया हैजिसका निर्णय दोनों पार्टियों (Supplier and Purchaser) पर अंतिम माना जाएगा।In case, any dispute arising out of this contract shall be subject to the jurisdiction of Indian laws & Court at New Delhi. Sole arbitrator is appointed by the Secretary, ICAR, New Delhi. His decision will be final and binding on both parties (Supplier and Purchaser).
13. सफल बोलीदाता को सौंपे गए कार्य को निर्धारित आपूर्ति आदेश के भीतर कार्य करना होगा जैसा आपूर्ति आदेश में दर्शाया गया होगा यदि ऐसा नहीं किया जाता तो कम से कम 2 % तथा अधिकतम 10 %की क्षति नष्ट कटौती के रूप में उनके बिल से काटी जाएगी।The successful bidder has to execute the indented Job/Work as mentioned in the supply order place with them within the stipulated period as given in the supply order placed by this office failing with 2% per week and maximum of 10% deduction as liquidated damage charges will be made from the bill in case the job is not completed within the given stipulated period
14. Full specification of the article quoted for sale be given in the quotation. Also provide the literature/pamphlet/drawing etc (if possible). User list of the quoted document may also be additionally provided for reference.
15. In Case, LC is open for purchase of Foreign equipment all charges outside India will be borne by the firm.

16. As per CVC's guidelines No.12-2-6CTE-SPJ(1)-2/161730 (circular No.3/1/12) dated 13/1/2012, in a tender either the Indian Agent on behalf of the Principal/OEM itself can bid but both cannot bid simultaneously of for the same item/product in the same tender. Further, if an agent submits bid on behalf the Principal/OEM the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.
17. The equipment is to purchase for Research purpose and therefore shall be purchased at **concessional GST Rate of 5%**. The required certificate shall be issued to the successful bidder for availing concessional GST Rate.
18. **Rates should be quoted as per BOQ 1 on-line.**
19. **Document to be uploaded should be signed by company/firm seal in all pages by the firm**

The following documents must be uploaded with the technical bid failing which tender will not be accepted at all.

1. GST Number (scan copy)
2. Pan Card Number (scan copy)
3. Registration certificate of firm (scan copy)
4. The tender documents duly signed by the concerned firm accepting the same should be attached with technical bid.
5. Detail Technical specification of equipment/item (literature/pamphlet/drawing etc).
6. Compliance Report in accordance with the tender technical specification.(**Annexure I**)
7. Certificate declaring that the firm has not been debarred/Black listed by the Govt. Deptt./Court of law for doing any business in India.(**Annexure II**)
8. Firm Details Document(**Annexure III**)
9. Check List(**Annexure IV**)
10. Bid Security Declaration Document (**Annexure V**)

**Required Specification: of Torque sensor, Load cell, BLDC Motor, Battery, Solar Panel, Linear Actuator, Servo Motor, Stepper Motor, Motor Drivers has been given in compliance report.**

सहायक प्रशासनिक अधिकारी  
Asstt. Admn. Officer

## Compliance Report

M/s.....agree to supply the items of following specification

### Technical Specification of Item वस्तु का तकनीकी विवरण

Details of item वस्तु का नाम व विवरण	Write Yes/No लिखे/हाँ न(	If yes, write technical details यदि हाँ तो विवरण दे	literature/pamphlet attached (yes/no)
<b>Torque sensor- (2 No.)</b>			
Type: Rotary type			
Capacity: 200Nm(Minimum)			
Least count : 1Nm(Maximum)			
Material: Alloy steel			
Display: Digital			
Over Load torque: 150%(Minimum)			
Maximum Speed: 25RPM			
<b>Load cell - (10 No.)</b>			
<b>1. S-Type Load cell (5 No.)</b>			
Capacity: 100kg			
Load cell Material: Alloy Steel,			
Type: Tension/ Compression			
Rated Output: 2±0.1 mv/v			
Temperature effect on sensitivity: <±0.02%			
Excitation Voltage: 5 to 15V			
Insulation Resistance: >2000 M ohm			
Operating Temperature Range: 0 to 60degree C			
Safe Load Limid: 130kg (Minimum)			
<b>2. Cantilever load Cell - (5 No.)</b>			
Capacity: 100kg			
Sensitivity: 1.0 0.1mv / v			
Operating temperature range: 0 to 60 degree C			
Safe overload: 120%(Minimum)			
Ultimate Overload: 130%(Minimum)			
Loadcell indicator: digit display			
<b>BLDC Motor - (10 No.)</b>			
<b>1. BLDC Motor 1000watt - (4 No.)</b>			

Voltage: 48V,			
Power: 1000Watt,			
Rated Speed: 3000 RPM,(approx)			
Coil Binding: copper material.			
Accesseries: controller, Charging Socket, Key			
<b>2. BLDC Motor 500watt - (4 No.)</b>			
Voltage: 48V,			
Power: 500Watt,			
Rated Current: 10 to 15A			
Minimum Rated Torque: 100Kg-cm			
Maximum Rated Speed: 450 RPM			
Gear Ratio: 1:6			
Accesseries: controller, Charging Socket, Key			
<b>3. Hub Motor 350watt- (2 No.)</b>			
Rated Power: 350W			
Maximum Speed: 328 RPM			
Compatible Wheel Size – 20 to 28 inch ;			
Rated Voltage: 36V			
Rated Current: 14A			
Accesseries: controller			
<b>Battery- (2 No.)</b>			
<b>1. 1kW power pack (1 No.)</b>			
Type: LiFePO4(Lithium phosphate)			
Voltage: 24V			
Rating: 48Ah(Minimum)			
Compatability: 250/500watt BLDC Motor			
Pack size set of two: 560x135x75mm (maximum)			
<b>2. 3 kW power pack (1 No.)</b>			
Type: LiFePO4(Lithium phosphate)			
Voltage: 48V			
Rating: 48Ah(Minimum)			
Compatability: 750/100watt BLDC Motor			
Pack size set of two: 560x135x75mm (maximum)			
<b>Solar Panel - (2 No.)</b>			
1000wattsemi flexible solar panel pack with cable and connectors			
Peak Power: 1000 watt			
Minimum panel size in power pack 200watt and parllely connected with current range 10 to 100A			
Maximum Voltage Range: 17 to 19 V			
Module Efficiency: 16% (minimum)			
Cells: polycrystalline solar cells, 4bus bars			
Pack type: Frameless			
Back Sheet: Composite Film			
Total power pack Weight: 15kg (Maximum)			
Solar Panel pack size Length: 3 to 4 meter, Width: 1.5 to 2 meter			

<b>Linear Actuator - (12 No.)</b>			
<b>1. Linear Actuator of stroke Length 300mm- (6 No.)</b>			
Stroke length: 300mm			
Minimum Speed at no load: 7 mm/sec			
Minimum Speed at full load: 5.5 mm/sec			
Minimum static load: 1500N			
<b>2. Linear Actuator of stroke Length 500mm- (6 No.)</b>			
Stroke length: 500mm			
Minimum Speed at no load: 7 mm/sec			
Minimum Speed at full load: 5.5 mm/sec			
Minimum static load: 1500N			
<b>Servo Motor - (10 No.)</b>			
<b>1. Servo motor with rated speed 10RPM – (5No.)</b>			
Power: 100watt			
Maximum Rated speed: 10RPM.			
Rated Torque: 380kgcm.			
Maximum Stall Torque: 960kgcm.			
Base Motor speed: 2800RPM.			
No-load current: 1.12A.			
Stall current: upto 30A(Max).			
Gear Ratio: 1:2.			
<b>2. Servo motor with rated speed 25RPM – (5No)</b>			
Power: 100watt			
Maximum Rated speed: 25RPM.			
Rated Voltage: 18 V DC			
Rated Current: 18.7 Amps			
Rated Torque: 650 kgcm			
No load speed: 31 RPM			
Maximum No Load current: 2.7 Amps			
Stall current: 130 Amps			
Gear Ratio: 1:6			
<b>Stepper Motor - (10 No.)</b>			
<b>1. Nema23 planetary geared stepper motor 120kgcm - (5 No.)</b>			
Step Angle : 1.8 Degree,			
Poles: 50			
Configuration: 4 wire bipolar stepper motor,			
Rated Voltage: 2.5V			
Phase current: 4.2Amp			
Rotor inertia: 480 gcm <sup>2</sup>			
Insulation Class: Class B			
Shaft Dia : 8mm (Minimum)			
Shaft Length : 8.5mm (Minimum)			
Gearbox Category : Planetary gear			

Efficiency : 96% (Minimum)			
Ratio : 1:10			
Gear output shaft Dia : 14mm (Minimum)			
Gear output shaft length : 25mm (Minimum)			
<b>2. Nema17 planetary geared stepper motor 60kgcm- (4 No.)</b>			
Step Angle : 1.8 Degree			
Configuration: 4 wire stepper motor			
Holding Torque: 58kgcm			
Rated Voltage: 2.8VDC			
Rated Current: 1.68Amps			
Moment permissible Toruqe : 60Kkgcm			
Rated Speed: 300RPM			
Motor length without Shaft: 84mm			
Shaft Length: 20mm			
Shaft Dia: 8mm			
Back shaft Length: 12mm			
Back shaft Dia: 5mm			
D-cut Length: 15mm			
Gear Ratio: 1:19			
Efficiency: 70% (Minimum)			
<b>Motor Drivers- (16 No.)</b>			
<b>1. DC Dual 12A Motor Driver - (6 No.)</b>			
Driver Model: Dual 12A,			
Peak Current (A): 25			
Continuous Current (A): 12			
Operating Voltage (VDC): 18 ~ 24			
No. of Channels: 2			
Arduino Sheild: No- can be used with Wire connection			
Thermal Protection: Yes			
Over-Current Protection: Yes			
Battery Protection Mode: Yes			
Other: Ultra-sonic switching frequency			
Operating Modes: Analog, R/C, Simplified serial, Packetized serial			
Polarity Protection: Yes			
<b>2. Micro-stepping stepper motor driver - (10 No.)</b>			
Voltage: 18VDC to 80VDC,			
peak coil current:1A to 7A.			
LED Indicator: Yes			
Short-circuit protection: Yes			
over-voltage and under-voltage protection: Yes			
Algorithm: advanced loop control			
Heat Sink: Anodized Aluminum 3mm thickness			

Signature with Seal



**(To be furnished on company letter head)**

**Declaration**

**This is to confirm that our firm .....**  
.....

**has never been blacklisted/debarred by any state Govt./Central Govt./ Department of  
Public undertaking enterprises.**

Date:  
Place:

Stamp & Signature

Name of the Authorized Signatory

**फर्म का विवरण Firm Details**

**(To be furnished on company letter head)**

Name of the Firm-----

Registered/Postal Address-----

1.	Permanent Account Number (PAN)	
2.	GST, Registration No., if applicable	
3.	Bank Details	
4.	Bank Name	
5.	Branch Address	
6.	Account Number	
7.	Type of account (current/saving)	
8.	MICR No.	
9.	RTGS/NEFT code	

Date:  
Place:

Stamp & Signature

Name of the Authorized Signatory

## Check List जांच सूची

Other Condition		
SN	Particular	Write (Yes/No)
1.	GST Number (scan copy)	
2.	Pan Card Number (scan copy)	
3.	Detail Technical specification of equipment/item (literature/pamphlet/drawing etc).	
4.	The tender documents duly signed by the concerned firm accepting the same should be attached with technical bid.	
5.	Registration certificate of firm(scan copy)	
6.	Compliance Report in accordance with the tender technical specification.(Annexure I)	
7.	Certificate declaring that the firm has not been debarred/Black listed by the Govt. Deptt./Court of law for doing any business in India. (Annexure II)	
8.	Firm Details Document (Annexure III)	
9.	Check List (Annexure IV)	
10.	<b>Bid Security Declaration Document (Scan copy).Annexure V</b>	

Signature with Seal

Name of authorized signatory

**Bid Securing Declaration**

**(To be submitted on Rs. 100 Non-Judicial Stamp Paper duly notarized)**

(Country

(City

Bid- Securing Declaration

Invitation to Bid No:

To

I/we, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid- Securing Declaration.
2. I/We accept that: (a) I/We will be automatically disqualified from bidding for any contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting order; and (b) I/we will pay the applicable fine provided under section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of the written demand by the procuring entity for the commission of acts resulting to the enforcement of the bid securing declaration under Section 23.1 (b), 34.2 40.1 and 69.1, except 69.1 (f), of the IRR of RA 9184; without prejudice to other legal action the government may undertake.
3. I/We understand that bid-securing declaration shall cease to be valid on the following circumstances:
  - (a) Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
  - (b) I am/ we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and
  - (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right;
  - (c) I am/ we are declared as the bidder with the Lowest Calculated and Responsive Bid, and I/we have furnished the performance security and signed the Contract.

**In witness whereof, I/we** have hereunto set my/our hand/s this \_\_\_\_ day of (month) at [place of execution].

Name of Bidder's  
Authorized Representative  
(Insert signatory's legal capacity)  
Affiant

**Subscribed and Sworn** to before me this \_\_ day of [month] [year] at [place of execution], \_\_\_\_\_ . Affiant/s is /are personally known to me and was/were identified by me through competent evidence of identity. Affiant/s exhibited to me his/her/[insert type of government identification card used], with his/her photograph and signature appearing thereon, with no. \_\_\_\_\_ and his/her community Tax Certificate No. \_\_\_\_\_ issued on \_\_\_\_\_ at \_\_\_\_\_ .  
Witness my hand and seal this \_\_\_\_ day of [Month] [ year].

Name of Notary Public  
Serial No. of Commission \_\_\_\_\_  
Notary Public for \_\_\_\_ Until \_\_\_\_\_  
Roll of Attorneys No. \_\_\_\_\_  
PTR No.\_\_\_\_, (dated issued), [ place issued]