



Office of the Department of Agricultural Engineering, N. M.
College of Agriculture
Navsari Agricultural University, Navsari-396450, Gujarat

E-Tender Document

For

Purchase of Working model of Engine/Tractor system,
Instruments, Installation and fixing
[Agril.Engg/NMCA/NAU/01-2017-2018](#)

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- Note:** 1. Please give PAGE NUMBERS in sequence to all documents uploaded online as well as sent in physical copies, including sequential fresh page numbers on each page of information uploaded online. Please note only uploaded documents will be considered for opening commercial bid. Kindly note that without physical submission of following documents company will be liable to be rejected on technical ground and commercial bid of the company will not be opened without assigning any reason.
2. The same page numbers are required to be mentioned in Company details (Company details and Check List - Page No. 14 - 16) uploaded online as well as in physical submission.
3. Only following FIVE documents required physical submission. Please ensure not to submit unnecessary documents in physical submission.
- a) Company details and Checklist (Page No. 14 - 16) in prescribed proforma (Submit copy online also)
 - b) Original signed Terms and Conditions (Chapter - 4 - Page No. 6 to 9) on all pages (Submit copy online also).
 - c) Original affidavit as per proforma attached (Page No: 18-19) duly signed and notarized (Submit online also)
 - d) Original Tender Fee Bank Draft (Submit scan copy online also)
 - e) Original EMD Fee Bank Draft (Submit scan copy online also)

Chapter 1: Tender Notice - Agril.Engg/NMCA/NAU/01-2017-2018

Purchase of Working model of Engine/Tractor system, Instruments, Installation and fixing

Bids from manufacturer/supplier/company are invited for the purchase of Working model of Engine/Tractor system, Instruments, Installation and fixing for Navsari Agricultural University. The list of purchase items under this tender are given underneath. The bids are invited by e-tender through website

www.nprocure.com or **au.nprocure.com**.

Tender Fee	Rs.1500
Period for Bid Document Downloading & Uploading	18/09/2017 to 18.00 hrs of 18/10/2017
The Last date for online tender submission	18/10/2017 up to 18:00 Hrs
Last date for physical submission of tender fee, EMD and other documents mentioned in Note -3 on page No. 2 above by RPAD / Courier / Speed post	24/10/2017 up to 17:00 Hrs
Bid Validity Period	Up to 31 st March, 2018
Earnest Money Deposit (EMD)	As per Chapter-5 of tender document
Technical documents available on	www.nprocure.com/au.nprocure.com

Chapter 2: Instructions to bidders for Online Tender Participation

1. All tender document can be downloaded free from the website <http://au.nprocure.com> or <http://www.nprocure.com>
2. All bids should be submitted online on the website <http://au.nprocure.com> or <http://www.nprocure.com>
3. All bids should be digitally signed. For the details regarding digital signature certificate and related training involved the below mentioned address should be contacted

(n)Code Solutions
A division of GNFC
301, GNFC Infotower, Bodakdev,
Ahmedabad 380054 (India)
Tel. : +91 79 26857316 / 17 / 18
Fax : +91 79 26857321
Toll Free Number: 1-800-233-1010
www.ncodesolutions.com

4. The user can get a copy of instructions to online participation from the website <http://au.nprocure.com> or <http://www.nprocure.com>
5. The service provider should register on the website through the "New User" link provided at the home page, the registration on the site should not be taken as registration or empanelment or any other form of registration with the tendering authority.
6. The application for training and issue of digital signature certificates should be made at least 72 hours in advance to the due date and time of tender submission.
7. For all queries regarding use of digital signature certificate should be addressed to personnel in M/s. (n) Code Solutions.
8. For all queries regarding tender (except item specification) should be addressed to the office address provided below.

The Principle,
N M College of Agriculture
Navsari Agricultural University,
Eru Char Rasta, Navsari – 396 450 (Gujarat)
E-mail: principal_agri@nau.in
Phone: 02637 282766

9. For queries regarding item specifications contact respective scientist preferably, during office hours as per chapter 7 on page No. 17.

Chapter 3: List of Purchase Items

Sr. No	Name of item	Quantity
1	Zero till seed drill (Tractor operated)	1
2	Aero blast sprayer	1
3	Vertical axis rotavater	1
4	Load cell/Dynamometer	1
5	Fuel supply system (working model)	1
6	Model Lubrication system (working model)	1
7	Model of tractor cultch (cut section)	1
8	Model of cooling system (water cooled)	1
9	Brake system (working model)	1

Note: Detail specifications with special terms and conditions of all above listed 9 purchase items are described under respective files mentioned in the above list.

Chapter 4: Terms and Conditions – Mandatory to submit signed Terms Conditions and online as well as physically

- Note:** 1) Terms and Conditions listed under chapter 4 are applicable to all purchase items. In addition to this, the product specification document of items may contain additional terms and conditions applicable to respective items.
- 2) Purchase of all Working model of Engine/Tractor system, Instruments, Installation and fixing will be followed as per the Gujarat Government Purchase Policy resolution - 2016 dated 3.6.2016

1. **General:**

- 1.1 Navsari Agricultural University (here in after referred to as "NAU"), for its Departments of Agricultural Engineering for their requirement of Items (as mentioned in Chapter-3) intend to invite for supply and installation of Working model of Engine/Tractor system, Instruments, Installation and fixing Departments of Agricultural Engineering, N M C A, Navsari. The scanned copy of the demand draft of the Tender Fee and Earnest Money Deposit (EMD) and security money (for details- Page No.10-11) as well as other relevant documents as per check list of the tender are required to be submitted online with the commercial bid on the website www.au.nprocure.com/ www.nprocure.com. It is compulsory to submit the original copies of all the documents mentioned in Note - 3 on page No. 2 of tender document physically in hard copy to Department of Agricultural Engineering, N M College of Agriculture, Navsari Agricultural University, Eru Char Rasta, Navsari -396 450(Gujarat) on or before 24/10/2017 up to 17.00 hrs.
- 1.2 Authorized dealers can quote their rates provided that they need to attach relevant certificate of authorized dealership issued during current financial year: 2017-18 from the manufacturer/principal company. Authorized dealers representing the same company / instruments are free to compete for price, terms, warranty period etc.

In case the vendor is a distributor authorized by an OEM (Original Instrument / Machinery Manufacturer), the following documents must be additionally provided

- **Certificate from OEM that the dealership/channel partnership arrangement with the bidder is in force for a minimum of 3 years.**
- **A letter by the OEM stating that they shall honor the supply/warranty/AMC commitments independent of continuation of the dealership/channel partner arrangement with the authorized dealer/channel partner.**

Irrespective of whether the bidder is an OEM or a distributor authorized by the OEM, the following eligibility criteria must be fulfilled

- The bidder should have made a positive operating profit
- The bidder should not be blacklisted by any Government or Government entity.
- The bidder should be in existence for a minimum of three years.

Date: - - 2017

Signature of Bidder

- 1.3 Technical Supporting Documents (TSD) should contain original Demand Drafts of Tender Fee and Earnest Money Deposit (EMD). In addition to these, TSD should also contain the documents mention in Note - 3 on Page No. 2. The envelope must be marked as "E-tender- Agril.Engg/NMCA/NAU/01-2017-2018: Technical Supporting Documents (Technical bid)". If bidder fails to submit the TSD physical submission within time limit, the commercial bid will be disqualified. Please note that the scan copy of document uploaded must tally with original physical submission.
- 1.4 The prices shall be inclusive of all freight, packaging and forwarding, transit insurance, installation charges, applicable taxes as per recent government rules & regulations as well as FOR destination (1st floor of the department). The rate should be quoted per item as specified in Chapter 3.
- 1.5 The bid is non-transferable.
- 1.6 Amendment of bidding documents (corrigendum)
 - 1.6.1 At any time prior to the deadline for submission of bids, NAU may, for any reason, whether its own initiative or in response to the clarification request by a prospective bidder, modify the bidding documents.
 - 1.6.2 The corrigendum will be published only on following on website <http://www.nau.in> and www.nprocure.com only.
 - 1.6.3. In order to allow prospective bidders reasonable time to take into consideration the amendments while preparing their bids, at its discretion, NAU may extend the deadline for the submission of bids.
- 1.7 Bid currency - Prices shall be quoted in Indian Rupee only.
- 1.8 The items shown in the Chapter-3 are subjected to requirements and the same may be purchased or may not be purchased without assigning any reason.
- 1.9 The successful bidder shall have to execute the purchase orders placed on any date during the validity of the tender at the rate, terms and conditions of the tender.
- 1.10 All the electronics items should comply to International Standards for safety, Electromagnetic Emissions, Electromagnetic Immunity etc.
- 1.11 Rate should be quoted along with all applicable taxes. However, NAU being an educational institute, therefore, is eligible for exemption of such duty from final payment.
- 1.12 The lowest price is not the criteria and emphasis is placed on quality and specifications of the material. The NAU has right to reject any or all the offers and invite fresh quotations if need arises. The NAU further reserves the right of selecting the brand and accepting or otherwise any of the conditions stipulated by bidder.
- 1.13 If in any case the quoted item is not available in the market, the successful bidder will have to supply higher version/replacement of that item in the quoted cost in the same time duration with prior approval of NAU (Selected bidder).

Date: - - 2017

Signature of Bidder

- 1.14 The successful bidder will held responsibility for the items sufficiently and properly packed for transport so as to ensure their being free from loss/damage/injury on arrival of destination NAU premises. The material should be supplied in the original company's packing which shall indicate packing details and other particulars as required under the statutory provisions. Inner and outer packing of boxes/cartons should be of standard design. The final packing of cartons of corrugated boxes shall be complying with ISS standards. A packing slip shall indicate clearly and legibly the name of the product, batch number, quantity, date of manufacturer, date of expiry, gross and net weight, and consignee's name & address and other particulars as required. In the event of breakages or loss of items during transit/installation against requisition order the said quantity will have to be replaced/supply by the supplier (Selected bidder) without any additional charges.
- 1.15 Tender Supporting Documents (TSD) received late and/or not submitted in the prescribed formats or in the prescribed manner, incomplete in any respect or not accompanied by prescribed mandatory documents are liable to be rejected. NAU will not be responsible for non-receipt of tender within the specified date and time due to any reason including postal delays.
- 1.16 All rights are reserved with the purchase committee/University Authority to accept or reject any or all the tenders received without assigning any reasons thereof.
- 1.17 Successful bidder failing to provide services after sales would be permanently blacklisted.
- 1.18 All the documents mentioned in Checklists are mandatorily uploaded and send only those documents in physical form as mentioned in Note - 3 on page no. 2. All documents must BEAR PAGE NUMBERS in sequence, including sequential fresh page numbers given on each page of printed /photocopy material uploaded online. The same page numbers must be mentioned in Company Details and CHECK LIST (Page No.14-16) provided.
- 1.19 Relaxation in tender fee, EMD will be considered as per Gujarat Government Purchase Policy resolution - 2016 dated 3.6.2016, however, for availing such benefits concern firm has to submit / attach certificate or relevant letter issued recently by the government otherwise relaxation benefit will not be extended to such firm and tender quoted, may be rejected
- 1.20 For finalization of purchase, Gujarat Government Purchase Policy resolution - 2016 dated 3.6.2016 will be followed so as to promote "Make in India" policy of the Government.
- 1.21 For query regarding detail specification of the instruments, firm can contact Principal, N M College of Agriculture, N A U, Navsari (as per Chapter 7), preferably during office hours.

Date: - - 2017

Signature of Bidder

2. Payment:

Advance or part payment will not be entertained.

3. Delivery:

The application for extension of delivery period shall be sent to concern ordering office of Navsari Agricultural University at least 5 days prior to the expiry of delivery period of each item. The Principal, N M College of Agriculture, N A U, Navsari, may grant extension or reject the application and their decision in the matter shall be final and binding to all.

4. Warranty:

4.1 **Period of Warranty:** The bidder must provide comprehensive onsite warranty for **minimum 2 years** or as asked in specifications, from the date of installation for all items. Please clearly mention the parts, which are not covered under warranty, separately.

4.2 **If any instrument(s), properly not working and repetitively fault is found, say twice a week during the warranty period, the bidder shall replace the item with new item without any additional cost to the purchaser.**

5. Demonstration:

Supplier has to perform on-site live demonstration as per trial with bidders'/ suppliers' consumables and reagents.

6. Dispute:

In case of any dispute, final decision of The Purchase Committee, Navsari Agricultural University, Navsari – 396 450 will be binding upon all. In case of any dispute arises in respect of this tender, a suit in that behalf shall be subject to Navsari Jurisdiction.

Date: - - 2017

Signature of Bidder

Chapter 5 : Tender Fee, EMD and Security Deposit – Mandatory to upload online as well as physical submission of original Tender Fee & EMD bank draft, if applicable

Bidder has to submit **non refundable Tender Fee (Rs. 1500 by bidder firm)** and Refundable Earnest Money Deposit (EMD) in the form of Bank Draft in favor of **“ASSISTANT ADMINISTRATIVE OFFICER, N M College of Agriculture”** payable at Navsari depending upon the number of Items applying for.

Tender Fee / Earnest Money Deposit/ Security Deposit

The bidder shall Earnest Money Deposit (EMD) Amount is depending upon the items quoted. EMD for the respective items is listed in following table:

Sr. No.	Name	Estimated cost in Rs.	EMD in Rs.		Security# Deposit in, Rs	
1	Zero till seed drill (Tractor operated)	80,000	2400		4000	
2	Aero blast sprayer	1,85,000	5550		9250	
3	Vertical axis rotavater	1,95,000	5850		9750	
4	Load cell/Dynamometer	80,000	2400		4000	
5	Fuel supply system (working model)	45,000	1350	Consolidated amount item of Sr. No. 5-9 Rs. 5760	2250	Consolidated amount item of sr. No. 5-9 9600
6	Model Lubrication system (working model)	35,000	1050		1750	
7	Model of tractor cultch (cut section)	15,000	450		750	
8	Model of cooling system (water cooled)	75,000	2250		3750	
9	Brake system (working model)	22,000	660		1100	

#Security Deposit: Successful bidder shall deposit as the security/performance guarantee money in the form of Bank Draft in favour of “Assistant Administrative Officer, NMCA” payable at Navsari.

Date: - - 2017

Signature of Bidder

Earnest Money Deposit: Tender shall be accompanied by an earnest money deposit, without which tenders will not be considered. The amount should be deposited in the form of Bank Draft only, in favor of "**Assistant Administrative Officer, N M College of Agriculture**" payable at Navsari. If, submitted EMD amount is not matching as per tender guideline basis on the tender items quoted for, bidder will be disqualified from the tender.

Refund of Earnest Money: The earnest money of unsuccessful Bidder will be refunded.

Forfeiture of Earnest Money: The earnest money will be forfeited in the following cases:

- When Bidder withdraws or modifies the offer after opening of tender but before acceptance of tender.
- When Bidder does not execute the agreement if any, prescribed within the specified time.

Security Deposit: Successful bidder shall deposit security/performance guarantee money in the form of Bank Draft in favor of "Assistant Administrative Officer, NMCA" payable at Navsari.

Forfeiture of Security Deposit: The security deposit will be forfeited in the following cases:

- When works/services are not successfully executed as per requirement mentioned in the tender document.
- When successful bidder terminate the works/services in during execution period.
- When any issue raised in quality or services during warranty period

Only Tender Fee and EMD bank Drafts in original along with Tender Supporting Documents mentioned in Note - 3 on Page No. 2 Submission Address:

The Principle,
N M College of Agriculture,
Navsari Agricultural University,
Eru Char Rasta, Navsari - 396 450 (Gujarat)

Date: - - 2017

Signature of Bidder

Chapter 6: Technical Bid Document (TBD) Submission

This chapter consists of forwarding letter (Page 13 of Tender Document), company details and Check List (Page 14 -16 of Tender Document), Affidavit on Rs. 100.00 stamp paper duly signed and notarized as per proforma given on Page No.18-19; with signed terms and conditions (Chapter – 4 – Page No. 6 to 9) along with original bank draft of tender fee and EMD, if applicable. All these pages required to be submitted in hard copy bearing page numbers in sequence which must be corresponding with online upload document submission.

While Company Detail and Checklist pages are also required to be submitted in n-procure with all relevant documents bearing page numbers correspondingly given in company details as well. If all the relevant informations are not submitted in n-procure, party is liable to be disqualified on technical ground.

Do not provide other unnecessary documents like explaining company profiles, nature of the company, services and miscellaneous things which is not inquired.

Do not put financial bids of the Items anywhere in the Technical Bid Document submission under physical submission otherwise liable to be rejected.

Only Tender Fee and EMD bank Drafts in original along with Tender Supporting Documents mentioned in Note - 3 on Page No. 2 Submission Address:

The Principle

N M College of Agriculture,

Navsari Agricultural University,

Eru Char Rasta, Navsari – 396 450 (Gujarat)

Company Details and Checklist:

Company Name: _____

Sr. No.	Details	Relevant Document & Date of issue	Page No.
1	Address (Latest)		
2	Contact No.	Landline with STD Code _____ Mobile No. _____	
3	Email ID		
4	Company Registration		
	GST NO.		
	TIN NO.		
	TAN NO.		
	Other Relevant Documents (Clearly Specify)		
5	PAN No. (Individual / Company) Clearly mention		
	IT Return – FY 2014 – 15 (AY 2015 – 16)		
	IT Return – FY 2015 – 16 (AY 2016 – 17)		
	IT Return – FY 2016 – 17 (AY 2017 – 18)		
6	Signed Terms and Condition – Chapter 4		
7	Company is not blacklisted Affidavit on Rs. 100 stamp paper duly notarized after the date of Advertisement		
8	NSIC Certificate	No. Date:	
	MSME certificate	No. Date:	
	DIC certificate	No. Date:	
	Other Relevant Documents (Clearly Specify)		
		No. Date:	
		No. Date:	
9	Other Relevant Documents (Clearly Specify) eg. proprietary / partnership deal, Shop Act Registration / Partnership deed / Memorandum of article / Registration of firm / Small Scale Industry Registration etc.)		

Date: - - 2017

Signature of Bidder

Sr. No.	Name	Estimated Cost in Rs. Enter corresponding values from Chapter - 5, if your firm is technically eligible for quoting commercial BID. (Kindly refer Item No. 1.21 for exemption and on page No. 10 - 11 for Tender fee & EMD payment details)	Page No. of Latest authorized dealership certificate issued during current FY directly from manufacture or other authorized dealer with validity of authorized dealership or Manufacturer certificate /subsidiary company certificate /Fresh Authorization Certificate issued during current FY	Page No. of Colour catalogue (original copy to be scanned & uploaded online otherwise liable to be rejected	Page No. of Quality Control certificate of manufacture company (ISO, CE etc.) - Date of Issue and validity to be scanned & uploaded online otherwise liable to be rejected
1	Zero till seed drill (Tractor operated)				
2	Aero blast sprayer				
3	Vertical axis rotavator				
4	Load cell/Dynamometer				
5	Fuel supply system (working model)				
6	Model Lubrication system (working model)				
7	Model of tractor cultch (cut section)				
8	Model of cooling system (water cooled)				
9	Brake system (working model)				

- Note:**
1. All documents uploaded as well as sent in physical form must BEAR PAGE NUMBERS in sequence, including sequential fresh page numbers given on each page of printed/photocopy material and same should be provided in the CHECK LIST above.
 2. All photocopied documents must be attested with seal and signature bearing page numbers.
 3. List of Institutes/organizations where supply of quoted item/s is made is preferable.

DECLARATION

I/We solemnly declare that we have attached all the documents mentioned here above and mentioned in the tender. It is verified that all the certificates/ permissions/ documents are valid and current as on date and have not been withdrawn /cancelled by the issuing authority.

I/We further undertake to produce on demand the original certificate / permission /document for verification at any stage during the processing of the tender.

I/We also understand that non-compliance of any documents will be treated as non respective tender and we will lose our claim to participate in the Tender Enquiry automatically and our tender will be liable to reject.

Name of the Firm:

Signature of Bidder
(With Stamp, Name & Designation)

Chapter 7: Contacts and Correspondence details

Correspondence address for submission of Physical documents:

The Principle,
N M College of Agriculture,
Navsari Agricultural University,
Eru Char Rasta, Navsari – 396 450 (Gujarat)

Email: principal_agri@nau.in

(For queries related to item specifications only. Please contact only during office hours.)

Professor and Head
Department of Agricultural Engineering
N M College of agriculture
Eru Char Rasta, Navsari – 396 450 (Gujarat)
Email: headag.engg@gmail.com
sharmavineet9@nau.in

Mobile No: 8128686708
9512686833

(TO BE SUBMITTED PHYSICALLY)

AFFIDAVIT

(To be submitted IN ORIGINAL on Non-Judicial Stamp Paper of Rs 100/- duly attested by First Class Magistrate /Notary Public)

I/We, _____ age _____, years residing at _____ in capacity of _____ M/s _____ hereby solemnly affirm that

1. All General Instructions, General Terms and Conditions, as well as Special Terms & Conditions laid down on all the pages of the Tender Form, have been read carefully and understood properly by me which are completely acceptable to me and I agree to abide by the same.
2. I/We have submitted following Certificates/Documents for T.E. as required as per General Terms & Conditions as well as Special Terms & Conditions of the tender.

Sr. No.	Name of the Document
1	
2	
onwards	

3. All the Certificates/ Permissions/ Documents/ Permits/ Affidavits are valid and current as on date and have not been withdrawn/ cancelled by the issuing authority.
4. It is clearly and distinctly understood by me that the tender is liable to be rejected if on scrutiny at any time, any of the required Certificates/Permissions/Documents/ Permits/ Affidavits is/are found to be invalid/ wrong/ incorrect/ misleading/ fabricated/ expired or having any defect.
5. I/We further undertake to produce on demand the original Certificate/ Permission / Document / Permits for verification at any stage during the processing of the tender as well as at any time asked to produce.
6. I/We also understand that failure to produce the documents in "Prescribed Proforma" (wherever applicable) as well as failure to give requisite information in the prescribed proforma may result in to rejection of the tender.
7. My/Our firm has not been banned /debarred /black listed at least for three years (excluding the current financial year) by any Government Department / State Government / Government of India/ Board/ Corporation/ Government Financial Institution in context to purchase through tender.
8. I/We confirm that I/We have meticulously filled in, checked and verified the enclosed documents / certificates / permissions / permits/ affidavits / information etc. from every aspect and the same are enclosed in order (i.e. in chronology) in which they are supposed to be enclosed. Page numbers are give on each submitted document. Important information in each document is "highlighted" with the help of "marker pen" as required.
9. The above certificates/documents are enclosed separately and not on the proforma printed from tender document.
10. I/We say and submit that the Permanent Account Number (PAN) given by the Income Tex Department is, which is issued on the name of [Kindly mention here either name of the proprietor (in case of Proprietor firm) or name of the tendering firm, whichever is applicable.]
11. I/We understand that giving wrong information on oath amounts to forgery and perjury, and I/We am/are aware of the consequences thereof, In case any

information provided by us are found to be false or incorrect, you have right to reject our bid at any stage including forfeiture of our EMD/PBG/cancel the award of contract. In this event, this office reserves the right to take legal action on me/us.

12. I/We have physically signed & stamped all the above documents along with copy of tender documents (page no..... to.....).
13. I/We hereby confirm that all our quoted items meet or exceed the requirement and are absolutely compliment with specification mentioned in the bid document.
14. My/Our Company has not filed any Writ Petition, Court matter and there is no court matter filed by State Government and its Board Corporation, is pending against our company.
15. I/We hereby commit that we have paid all outstanding amounts of dues / taxes / cess / charges/fees with interest and penalty.
16. In case of breach of any tender terms and conditions or deviation from bid specification other than already specified as mentioned above, the decision of Tender Committee for disqualification will be accepted by us.

Whatever stated above is true and correct to the best of my knowledge and belief.


Date:

Stamp & Sign of the Tenderer

Place:

(Signature and seal of the Notary)

Chapter 8: LIST OF PURCHASE INSTRUMENT WITH SPECIFICATION

Sr. No	Item	Specification
1.	Zero till seed drill (Tractor operated)	<ul style="list-style-type: none"> • 7-Tyne, • Tyne height: 50 cm • Tyne spacing : 25 cm • Tool bar spacing: 55 cm • Tool bar size: 60cmX60cm • Tyne fitting adjustable • Inverted T- type furrow opener • Incline plate seed metering unit for capable for rice seed sowing • Variable hole cum agitator type fertilizer metering unit
2.	Aero blast spryer	<p>Tractor operated 45 HP tractor</p>  <p style="text-align: center;">Tractor operated Aeroblast Sprayer</p>
3.	Vertical axis rotavater	<p>Working Width -1.0 m, Speed: Multi speed option Vertical axis type PTO speed 540 rpm PTO shaft size: 6-spline Attachments: Spike Roller /cage roller</p>
4.	Load cell	<p>Type: Digital with data logger It used for measurement of draft in agricultural field implement (pull type) Hook both side Capacity range: 0 to 1800kgf</p>
5.	Fuel supply system (tractor)	<p>Fuel supply system model is three/two cylinder tractor engine. Component in chain:</p> <ul style="list-style-type: none"> • Fuel tank • Fuel coke • Sediment bowel • Primary and secondary filter • Fuel supply pump • F I Pump (plunger type) • Fuel injector • Governor <p>System operated by a two phase AC electric motor</p>

6.	Model Lubrication system	Three/Two cylinder tractor engine. Component in chain: <ul style="list-style-type: none"> • Pump (rotary) • Filter • Crank shaft • Crank case • Oil flow line • Oil flow line transparent material see the oil flow • Mode cover by the glass or transparent material • System operated by a two phase AC electric motor
7.	Model of tractor Cultch	Single clutch plate system cut section
8.	Model of cooling system (water cooled)	<ul style="list-style-type: none"> • Radiator (small part cut and covered transparent) • Type: water cooled • Cooling fan • Water supply pump • Thermostat valve • House pipe • Water jacket (water flow line make by transparent material see the water flow) • System operated by a two phase AC electric motor
9.	Brake system	Disc Brake (used in tractor) Paddle, Braking system