

# TENDER DOCUMENT

**For purchase of Testing Equipment/Machines & Accessories Under the  
“National Technical Textile Mission (NTTM) Projects” & “DST-SEED Project”**

**Total No. of Equipment : 2 + 8 = 10 (Ten)**

**Tender No. Nitra/Pur/PT-2/2023-24/ 2276**

<b>Sale of Tender Document &amp; Downloading up to</b>	<b>: 23-08-2023 (up to 05.30 pm)</b>
<b>Last date &amp; time for acceptance of Tender</b>	<b>: 24-08-2023 (up to 12.00 pm)</b>
<b>Tender opens on (Technical Bids only)</b>	<b>: 24-08-2023 (at 03.00 pm)</b>
<b>Financial Bids Opening</b>	<b>: Will be intimated later to eligible bidders</b>

**NORTHERN INDIA TEXTILE RESEARCH ASSOCIATION  
( Linked to Ministry of Textiles, Govt. of India)  
SECTOR-23, RAJ NAGAR, GHAZIABAD-201 002 (U.P.), INDIA  
Phone No: 0120-2807390/91/92/93/94/95  
Fax No: 0120-2783596, e-mail: [mail@nitratextile.org](mailto:mail@nitratextile.org)  
Website : [www.nitratextile.org](http://www.nitratextile.org)**

**VOLUME - I**  
( Part – 1 )  
**INSTRUCTION TO TENDERER**

**INSTRUCTION TO TENDERER**

**1.0 GENERAL**

1.1. Tender form may be downloaded from NITRA's website [www.nitratextile.org](http://www.nitratextile.org) up to 23-08-2023 till 05.30 PM. Alternatively printed copies can be obtained from NITRA's office at free of cost.

1.2 Modifications if any of the above documents will be made by addenda / corrigenda, copies of which will be sent in duplicate to each tenderer before the due date of the tender. One copy shall be signed, sealed and submitted packed along with the tender documents. Tender documents to be submitted, are as detailed hereafter.

The tenderer shall not make any additions / deletions to or amend the text of the documents except in so far as may be necessary to comply with any addenda / corrigenda issued. The tenderer shall use only tender documents as issued for submitting his quote and shall comply to various terms and conditions.

1.3 E-mail, Fax, Telex or Telegraphic tenders shall not be entertained.

1.4 The tender shall be filled in & submitted in English only. All accompanying literature and correspondence shall also be in English.

1.5 No claim for costs, charges, expenses incurred by the tenderer in connection with preparation of tender submission and for subsequent clarifications of their tender shall be accepted.

1.6 Bidders are required to submit Earnest Money Deposit through a Demand Draft favoring 'Northern India Textile Research Association' payable at Ghaziabad. Disqualified bidder/bidders will get back their EMD within 30 days from the date of opening of financial bid/bids. Demand Draft submitted towards EMD shall be returned after receipt of performance Bank Guarantee from successful bidder.

1.7 Nitra reserves it right to alter, change, cancel partially or fully, rescind or modify the terms and conditions of tender without assigning any reason thereof.

## **2.0 TENDERER TO STUDY DOCUMENTS**

- 2.1 Submission of the tender by the tenderer implies that he has read tender documents and has made himself aware of the specifications of machinery and the terms and conditions.
- 2.2 The tenderer shall be deemed to have full knowledge of documents and no extra charges consequent on any misunderstanding or otherwise shall be allowed.
- 2.3 Any question regarding the tender document and discrepancies shall be directed to the Tender Issuing Authority in writing minimum 10 days prior to the due date of submission of tender. The Tender Issuing Authority shall issue all clarifications, interpretations, meanings and specific directions if any in duplicate in writing to all the tenderers. **One copy of these shall be returned duly signed and seal affixed along with tender submission.**

## **3.0 SUFFICIENCY OF THE TENDERER**

- 3.1 The tenderer shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender and about the rates quoted by him and cover all his obligations under the tender.

## **4.0 METHOD OF TENDERING**

Each and every paper of tender documents shall be signed by the authorized person(s) and seal affixed.

### **4.1.0 Authority of signing**

- 4.1.1 If the tender is submitted by an individual, it shall be signed by him.
- 4.1.2 If the tender is submitted by a proprietary firm, it shall be signed by the proprietor.
- 4.1.3 If the tender is submitted by a partnership firm, it shall be signed by all the partners of the firm or by a partner holding the power of attorney for the firm for signing the tender, in which case, a certified copy of power of attorney shall accompany the tender.
- 4.1.4 If the tender is submitted by a limited company or a corporation, it shall be signed by a duly authorized person or the person holding the power of attorney for signing the tender, in which case a certified copy of the power of attorney shall accompany the tender.
- 4.1.5 All witnesses and sureties shall be persons of respectable status and probity and their full name, occupations and addresses shall be stated below their signatures.

#### **4.2.0 Stating of Rates**

- 4.2.1 The tender shall be filled in English with a neat hand / type and all the figures and words shall be legible.
- 4.2.2 The rates shall be written both in words and in figures. The tenderer shall also show the amount for each item, the total of each section and the grand total of the whole tender.
- 4.2.3 Correction if any shall make Correction, initialing, dating and rewriting.
- 4.2.4 In case of conflict between the figures and words in the rates, the latter shall prevail.
- 4.2.5 The tenders will be verified for accuracy in the arithmetical calculations.

#### **4.3.0 Packing and Submission**

- 4.3.1 The tender shall be submitted on or before and at the address given in Appendix-TF given in Tender Form. Any tender received after this date and time shall not be accepted. Tenders shall be packed, marked and sealed and submitted in original with documents listed below. **Tender shall be submitted in Two separate sealed cover, “Technical Bid” & “Financial Bid”.**
- 4.3.2 Sealed cover “**Technical Bid**” shall contain
  - a) EMD - DD of not less than 2% of tender value or Rs.10,000/- (Rupees Ten Thousand only) whichever is lower is to be submitted from any Scheduled Bank. The applicant without EMD will be out rightly disqualified.
  - b) SSI Certificate if the Manufacturer/supplier, are registered as small industries with the Government. The SSI Manufacturer/supplier are exempted to deposit EMD. (Self attested copy of the Registration Certificate is to be submitted).
  - c) Profile of bidder’s organization along with copy of PAN and GST Registration Certificate.
  - d) If the bidder does not manufacture the equipment, authorization of the manufacturer to the bidder for marketing and servicing the equipments in India should be enclosed along with the tender. In the absence of such authorization, the tender will not be considered.
  - e) Tender documents, which shall be signed by the authorized person(s) and seal affixed.
  - f) Volume II - Technical Specifications in details of equipment /machine for which bid has been submitted.
  - g) List of items including spare parts with quantities for which the financial bid has been submitted.

- h) The machine/equipment for which bid has been submitted should contain Cliental List of internationally reputed institutes/ companies located in India and other countries.

4.3.4 Sealed cover “**Financial Bid**” shall contain financial Specification

- a) Bill of Quantities duly completed with price.
- b) The undertaking that Tender Form is duly completed signed and sealed for entering into agreement with terms and conditions for this contract.
- c) Covering letter in duplicate bringing out the tenderer’s reservations, if any, regarding compliance with the tender document and his own specific assumption, if any.
- d) Bills/Schedule of Quantities duly completed with price which will be inclusive of all taxes (GST and any other taxes), duties (Excise Duty, Custom Duty etc.) any other Govt. levies & all other charges ( packing, forwarding, loading-unloading, erection and commissioning, insurance and any other incidental charges by whatever name called).
- e) It is necessary to fill the Tender Value precisely. In case, all individuals’ items are not quoted, it will be deemed that that Tender Value is inclusive of quotes of all the individual items as per the tender document.
- f) Validity of bid/bids (technical & financial) should be 180 days.
- g) Volume I (Part -1) Instruction to Tenderer, Volume I (Part-2) - Tender Form, Appendix – TF , Volume-1 (Part-3) Terms & Conditions and addenda / corrigenda /clarification issued before due date of tender duly signed and sealed (in token of acceptance of documents).
- h) In case of Imported Items, Please quote Free On Board (FOB) value (at nearest foreign Airport/ Sea port) & Also quote separately CIP charges up to IGI Airport, New Delhi or ICD Patparganj / Tughlakabad, Delhi (whatever applicable). Also specify compulsorily the packing dimension, Nos. of Box / Cartoon & gross weight of each Box/Cartoon (Packing list). Please specify the name of the port &Country, from where the goods will be dispatched.

4.3.5. Separate bid for each of the items should be submitted in an envelope super scribed **with the name of the item at the top, last date of submission, name and address of the bidder.**

4.3.6. In the case of nonwoven machines and preparatory machines the supplier can bid for individual machines also. In that case of title of the machine need to be mentioned on the cover positively.

4.3.7. The sealed envelope containing covers ‘**Technical Bid**’ & ‘**Financial Bid**’ as above shall be marked in the name of **The Chairman, Purchase Committee, NITRA, Ghaziabad clearly indicating the name of the item for which the bid is submitted.**

## **5.0 TENDER TO BE VALID FOR**

Rates quoted by the tenderer shall be valid for a period as given in Appendix-TF from the date of submission or till an extended date mutually as agreed on expiry of the said period.

The Tenderer shall not withdraw or revise or alter any conditions, rate(s) quoted within a stated period, unless he is called upon to do so in mutual agreement / negotiations. NITRA reserves the right to cancel the bid if the tenderer revokes or withdraws the tender within a stated period.

## **5.1 OPENING OF TENDER**

- 5.1.1 The tender shall be opened by the Purchase Committee NITRA on the designated date and time in the confidence on event of any change in the date and time of tender opening, the same would be informed to the tenderer through public notice or individual correspondence or through our website.

## **6.0 AGREEMENT**

- 6.1 The successful tenderer shall be bound to implement the contract on receipt of intimation of acceptance from the Purchase Committee, NITRA.
- 6.2 The successful tenderer shall bear stamp duty and other expenses pertaining to preparation and execution of contract document / agreement.

## **7.0 PROCEDURE FOR REJECTION**

- 7.1 The Purchase Committee, NITRA Ghaziabad reserves the right to accept or reject any tender or reject all tenders without giving any reasons for their decision.
- 7.2 Tenders are liable to be rejected in which any of the particulars / prescribed information is either missing or incomplete in any respect and or if the prescribed conditions are not fulfilled.
- 7.3 Canvassing in connection with tender is strictly prohibited and tender submitted by tenderers who resort to canvassing will be liable to rejection.
- 7.4 Tenders containing uncalled remarks or any additional conditions are liable to be rejected. Tenderer can bring out in his / their covering letter along with submission of tender cover "Financial Bid", his / their's any reservations, additions, omissions, and assumptions they might have made while pricing the tender. Tender Issuing Authority reserves the right to ignore such additions, deletion other than brought out in covering letter packed in cover "Financial Bid", by the tenderer. Decision of the Purchase Committee NITRA, Ghaziabad, in this regard shall be final and any non-compliance shall reject the bid.

**VOLUME – 1**  
( Part – 2 )

**TENDER FORM**

To,  
The Chairman  
Purchase Committee  
NITRA  
Sector-23, Raj Nagar  
Ghaziabad – 201 002 (U.P.).

**Sub : Supply of testing equipment/ machinery to NITRA, Ghaziabad  
as per the specifications and Quantities mentioned in the tender.**

Dear Sir,

- a. Having examined the conditions of Tenders / Specifications of the machinery / equipments, we, the undersigned, offer to supply equipment/machines as mentioned in the Annexure as per the quantity and specifications given in the tender.
- b. We agree to abide by this tender for the period given in Appendix TF from the opening date fixed for receiving the same and it shall remain binding upon us for a mutually extended period agreed in writing by us.
- c. If our tender is accepted, we undertake to supply the Equipment/machinery and install the same in NITRA, Ghaziabad mentioned in the tender within the specified periods in Appendix-TF on receipt of written order from the Purchase Committee, NITRA.
- d. If our tender is accepted we will, obtain and arrange:
  1. Transit insurances
  2. Any other statutory obligation, if any, prior of commencement of supply of machinery.
- e. We agree to your right to cancel the order or stop payment without prejudice to any other right or remedy for the following failures on our part.
  1. Changes to tender are made within Validity Period as specified in Appendix-TF.
  2. Supply and installation of equipment/machineries is not commenced within specified period as given in Appendix-TF.
  3. Obligations under (e) above are not fulfilled.

- f. Unless and until a formal agreement/purchase order is prepared and executed, this tender together with your written acceptance thereof, shall constitute a binding contract between us.
- g. We understand that you are not bound to accept the lowest or any tender you may receive.
- h. We agree to make a presentation of the products to be supplied by us, before the Purchase Sub-Committee on the date specified by it.
- i. Fluctuation in foreign exchange rates in respect of the imported equipment/machinery shall be borne by the equipment/machinery suppliers / authorized Agents.
- j. We hereby declare that the rates quoted by us are the lowest rates.
- k. In case of Imported Items, We have quoted Free On Board value (at nearest foreign Airport/ Sea port) & Also quoted separately CIP charges up to IGI Airport, New Delhi or ICD Patparganj / Tughlakabad, Delhi (whatever applicable). Also specified the packing dimension, Nos. of Box / Cartoon & gross weight of each Box/Cartoon (Packing list).

Authorized Signatory  
to tenderer

Signature dated  
Designation / Capacity  
Name  
Address

WITNESS 1

Signature

ADDRESS

Name

DATE

WITNESS 2

Signature

ADDRESS

Name

DATE



## APPENDIX - TF

Sr. No.	Particulars	Remarks
1	Validity of Tender	180 days
2	Address, date and time of submission of the Tender Documents.	The Chairman, Purchase Committee, NITRA, Sector-23, Raj Nagar, Ghaziabad, U.P.-201002, India. <b>Up to 12.00 PM 24-08-2023</b>
3	Supply, installation and commissioning of the machinery etc.	Within 3 months from the date of placement of order or advance paid failing which order may be cancelled.
4	<b>Period of warranty / performance guarantee of machines.</b>	3 Years
5	Submission of the Programme for delivery.	Within 21 days from the date of the acceptance of the order placed.

### **SEAL AND SIGNATURE OF TENDERER**

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## **VOLUME – I**

(Part – 3)

### **TERMS AND CONDITIONS**

1. Before submissions of the tender, the prospective bidders are expected to examine Technical Specifications of the equipment/machineries allied items required, terms and conditions, etc., given in the Tender Documents. Failure to furnish all information required by the Tender documents may result in the rejection of the bid. Detailed specifications of the items tendered and other accessories should be given, in the bid.
2. The descriptive leaflet giving the technical details of the equipment/machineries allied items should be supplied along with the quotation.
3. All accessories required for using the main equipment/machinery to make it fully operational for production are to be specified.
4. The suppliers of the machinery / equipment should provide both theoretical and practical training after commissioning the machinery or at an appropriate stage.
5. The price quoted should be exclusive of duty, Taxes, installation etc., which should be shown separately in the bid, if applicable. Freight and Insurance charges are to be indicated separately and the same will be paid at actual against supporting documents produced. Packing, forwarding and other charges as applicable are to be indicated separately in the tender.
6. The terms of payment in case of indigenous equipment/ machinery & accessories shall be as under :
  - a) 20% of the machinery cost ex-factory will be paid as advance against confirmation of orders.
  - b) 70% payment will be made against successful installation, commissioning and demonstration of satisfactory performance of the machinery / equipments at site.
  - c) Balance 10% payment will be made within one month from the date of installation & submission of Performance Guarantee for 12 months. If performance guarantee is not being submitted, then remaining payment will be released after 12 months from the date of installation. Format of Bank Guarantee will be provided in due course.
7. In case of Imported Items, 100% Payment will be made through Irrevocable Letter of Credit.

8. Delivery of the equipment/machineries should be as per the commitment from the date of receipt of initial payment against acceptance of order in case of Indigenous machinery and should not be extended.
9. **The pre-installation requirements including space, nature of civil work, power point, power requirement etc. are to be mentioned clearly in the technical bid.**
10. Separate bid for each of the items should be submitted in an envelope super scribed with the name of the item at the top, **“LAST DATE OF SUBMISSION: 24-08-2023 (12.00 PM), NAME AND ADDRESS OF THE BIDDER.** The sealed envelopes shall be marked in the name of **“The Chairman, Purchase Committee, NITRA, Ghaziabad”.**
11. The list of organizations (with full addresses, telephone / fax no., e-mail addresses etc.) in India and abroad to which the equipment/machinery were supplied is to be provided in the bid for our reference. Preference will be given if the supplies are made to internationally reputed test houses both in India and other countries particularly for the bided equipment.
12. Validity of the tender should be available up to 180 days. The tender may be rejected if the validity is not given up to 180 days.
13. The supplier should take responsibility for delivering, installing and commissioning of the machinery inside the premises of NITRA, Ghaziabad or at the address as specified in the Purchase Order.
14. Late / delayed tender offers will not be considered at all.
15. Any non-fulfillment of the stipulation given above will make the bid invalid.
16. If the tenders received are not sealed properly, they will not be considered at all.
17. Purchase Committee, NITRA reserves the right to accept or reject any or all the bids either in full or part without assigning any reason thereof.
18. The local supplier shall be entirely responsible for all taxes duties, license fees etc., incurred until delivery of the contracted goods (to the purchaser) up to place of delivery.
19. The delivery installation & commissioning period of the equipment/machinery as agreed to should not be extended under normal conditions. Suitable penalty for non-execution of the order may be enforced to the extent of 1% of the cost of machinery for every week extended. In case of the delay beyond scheduled period due to some unforeseen reason, written permission is required from the Chairman, Purchase Committee, NITRA, with proper justification to avoid penalty.

20. The equipment/machinery & accessories should be delivered, installed and commissioned at the address specified in the order. Service / operation / instruction / calibration manuals (in English) tool kit and gauges must also be supplied along with the machinery and accessories.
21. During the guarantee / warrantee period, servicing / maintenance should be undertaken regularly, subsequently Servicing/maintenance should be undertaken by the manufacturer or authorised agency of the manufacturer.
- 22. Warranty / performance guarantee period of three years should be given in respect of all the machinery and accessories supplied. Terms for service contract after the expiry of said warranty period are to be quoted separately.**
23. The manufacturer / supplier may indicate the Status of the Manufactured Product / or of the performed services as regards to ISO 9000 quality system..
24. List of servicing centres in India is to be indicated with detailed address, telephone no. / fax no. / e-mail address etc.
25. All pre-installation requisites such as Cables, Plugs, Compressor, Stabilizer etc. should be provided by the supplier along with the equipment/ machinery. NITRA, Ghaziabad concerned will provide adequate space, electricity & water, as the case may be, for the successful installation and commissioning of the equipment/ machinery.
26. The Capacity statement of equipment, plant and past performance details should be provided.

NOTE: The bidder has to specifically state that the clauses one to all as above have been read and understood and agree to comply all the above mentioned clauses individually.

**TECHNICAL SPECIFICATIONS**  
**(Volume-II)**  
**List of Equipment / Machines**

<b>Sl.No.</b>	<b>Name of the Equipment/ Machine</b>	<b>Qty.</b>	<b>Location</b>
<b>For NTTM Project</b>			
1.	Pilot Scale Nonwoven & Preparatory Machine (Fine Fibres)	1 Set	Ghaziabad
2.	Pilot Scale Nonwoven & Preparatory Machine (Coarse Fibres)	1 Set	Ghaziabad
<b>For DST-SEED Project</b>			
1.	Carding Lab model	1 Set	Ghaziabad
2.	Draw-Frame	1 Set	Ghaziabad
3.	Ring-Frame	1 Set	Ghaziabad
4.	Fibre Extractor/Decorticator	1 Set	Ghaziabad
5.	Jigger Dyeing Machine	1 Set	Ghaziabad
6.	Hank Dyeing Machine	1 Set	Ghaziabad
7.	Padding Mangle	1 Set	Ghaziabad
8.	Sanitary Napkin Vending Machine	1 Set	Ghaziabad

**For NTTM Project:**

**1. SPECIFICATION FOR PILOT SCALE NONWOVEN FABRIC-MAKING MACHINE (NEEDLE PUNCHING) & PREPARATORY MACHINES (Fine fibres)**

**1. Opener cum lap forming machine**

- Working width – Up to 250 mm or more
- Suitable for – Fibre fineness 2.0 to 4.5 Micronaire
- Machines supply – ready to run condition with all required accessories  
Spares & accessories

## **2. Lab Model Carding Machine**

- Working width – 450-500mm
- Suitable for – Fibre fineness 2.0 to 4.5 Micronaire
- Machines supply – ready to run condition with all required accessories
- Spares & accessories
- Suitable for processing of synthetic and natural fibres

## **3. Lab Model Cross Lapper Machine**

- Working width – 250 mm to 450 mm
- Capable of – laying carded web into folds across the machine conveyor
- Provision for – Varying delivery rate to control web thickness
- Machines supply – Ready to run condition with all required accessories
- Spares & accessories

## **4. NON-WOVEN NEEDLE PUNCHING MACHINE**

- Computer controlled Lab model
- Working width - 450mm-500mm
- Stroke length of Needle Punching machine -60mm
- Needle density – Suitable for handling the fibre of fineness 2.0 to 4.5 Micronaire
- Punches per minute up to 100
- Machines supply – ready to run condition with all required accessories
- Suitable for processing of synthetic and natural fibres
- Computer with proper specification to run the machine

## **General Requirements**

1. Vendor shall be responsible for the installation & commissioning of the complete system at the NITRA site.
2. Comprehensive training of NITRA personnel shall be provided along with operation, and maintenance of the complete system.
3. Detailed checklists and operation manual/s shall be provided for regular operation, operation, and maintenance of the complete system.
4. Necessary Tools and Spares for the operation and maintenance of the complete system shall be provided.
5. Full system drawings, part lists, etc shall be provided.
6. Details of authorized resellers/agents/representatives in India, along with their address and contact information shall be provided.
7. Indian Agent Commission and copy of the agreement with Indian Agent.
8. Bidder should agree in writing to provide technical support and spares for a period of at least ten years after completion of the standard warranty term of one year (only willingness to be indicated not the associated cost).
9. Extended Warranty/CMC costing to be provided 3 Years (post standard warrant terms of one year)

10. Infrastructure/facilities required from NITRA for successful installation & Commissioning.
11. A list of preferably 5 satisfactory buyers of the same instrument/apparatus shall be provided by the tenderer. A letter from the buyer about the satisfactory running of the machine should be provided.

## **2. SPECIFICATION FOR PILOT SCALE NEEDLE PUNCHING NON-WOVEN FABRIC MAKING MACHINE & PREPARATORY MACHINES (Coarse fibres)**

### **1. Lab Model Carding Machine**

- Working width – 450-500mm
- Suitable for – Fibre fineness 84 to 280 Micronaire
- Machines supply – ready to run condition with all required accessories
- Spares & accessories
- Suitable for processing of synthetic and natural fibres

### **2. Lab Model Cross Lapper Machine**

- Working width – 250 mm to 450 mm
- Capable of – laying carded web into folds across the machine conveyor
- Provision for – Varying delivery rate to control web thickness
- Machines supply – Ready to run condition with all required accessories

### **3. NON-WOVEN NEEDLE PUNCHING MACHINE:**

- Computer controlled Lab model
- Working width - 450mm-500mm
- Stroke length of Needle Punching machine -60mm
- Needle density – Suitable for handling fibres of fineness 80-280 micronaire
- Punches per minute up to 100
- Machines supply – ready to run condition with all required accessories
- Suitable for processing of synthetic and natural fibres
- Spares & accessories
- Computer with proper specifications to run the machine

### **General Requirements**

1. Vendor shall be responsible for the installation & commissioning of the complete system at the NITRA site.
2. Comprehensive training of NITRA personnel shall be provided along with operation, and maintenance of the complete system.
3. Detailed checklists and operation manual/s shall be provided for regular operation, operation, and maintenance of the complete system.

4. Necessary Tools and Spares for the operation and maintenance of the complete system shall be provided.
5. Full system drawings, part lists, etc shall be provided.
6. Details of authorized resellers/agents/representatives in India, along with their address and contact information shall be provided.
7. Indian Agent Commission and copy of the agreement with Indian Agent.
8. Bidder should agree in writing to provide technical support and spares for a period of at least ten years after completion of the standard warranty term of one year (only willingness to be indicated not the associated cost).
9. Extended Warranty/CMC costing to be provided 3 Years (post standard warrant terms of one year)
10. Infrastructure/facilities required from NITRA for successful installation & Commissioning.
11. A list of at preferably 5 satisfactory buyers of the same instrument/apparatus shall be provided by the tenderer. A letter from the buyer about the satisfactory running of the machine should also be provided.

**For DST-SEED Project:**

**1. Carding Machine Lab model:**

- |                        |   |   |
|------------------------|---|---|
| Type of machine        | : | Lab model Carding M/c for training and R & D purpose  |
| Working width          | : | 250 to 400 mm   |
| Driving system control | : | 220 V, 50 Hz motor with AC variable drive for speed control   |
| Carding process        | : | <ul style="list-style-type: none"> <li>• suitable for various fibres specially natural coarse fibre upto 45 denier fineness</li> <li>• Carding action to align and separate fibers, removing impurities and creating a web of fibers</li> </ul>   |
| Capacity               | : | <ul style="list-style-type: none"> <li>• Adjustable feed roller system</li> <li>• Automatic control of web tension and web width with uniformity</li> <li>• Provision for interchangeable carding elements to accommodate different fiber types (Optional)</li> <li>• Integrated cleaning system to remove impurities and waste from the carding machine (Optional)</li> <li>• Adjustable processing rate</li> <li>• Provision for adjusting carding settings such as cylinder speed, doffer speed, and carding force (Optional)</li> </ul> |
| Other requirements     | : | <ul style="list-style-type: none"> <li>• User manual with detailed instructions for operation, maintenance, and troubleshooting</li> <li>• Warranty for two years</li> </ul>  |



- Essential spares and accessories for two years
- One extra set of electronic card (if any)
- Machine in ready to run condition
- After sales support

## 2. Draw Frame Machine

Type of machine	: Lab model suitable for training and R & D purpose
Driving system control	: 220 V, 50 Hz motor with AC variable drive for speed control
Drawing process	: Suitable for drawing and blending various types of fibres with Improved evenness and parallelization
Capacity	: <ul style="list-style-type: none"> <li>• 3 over 3 drafting arrangement</li> <li>• Adjustable feed roller system</li> <li>• Automatic feed regulation to maintain a consistent fibre supply</li> <li>• Provision for interchangeable drafting elements to accommodate different fibre types (Optional)</li> <li>• Provision for adjusting and maintaining the desired drafting zone parameters</li> <li>• Capability to blend different fibre types or different qualities of the same fibre during the drawing process</li> <li>• Provision for adjusting and maintaining the desired drafting zone parameters</li> </ul>
Other requirements	: <ul style="list-style-type: none"> <li>• User manual with detailed instructions for operation, maintenance, and troubleshooting</li> <li>• Warranty for two years</li> <li>• Essential spares and accessories for two years</li> <li>• One extra set of electronic card (if any)</li> <li>• Machine in ready to run condition</li> <li>• After sales support</li> </ul>

## 3. Ring Frame Machine (Ambar Charkha)

Type of machine	: 3 to 10 spindles suitable for training and R & D purpose
Driving system	: Manual and /or electric motor of 220/230 V, 50 Hz with AC variable drive for speed control
Spinning process	: <ul style="list-style-type: none"> <li>• Suitable for various fibres specially natural coarse fibre upto 45 denier fineness</li> </ul>

- Ring diameter and bobbin lift suitable for developing yarn from coarse natural fibres
- Capable to convert the drawn sliver into yarn through twisting and winding

Capacity

:

- Adjustable spindle speed and drafting speed
- Control of drafting zone length and configuration
- High-speed, precision spindle system suitable for laboratory-scale production
- Provision for adjusting and maintaining desired drafting zone parameters
- Provision for adjusting spindle speed and monitoring yarn tension (Manual)
- Provision for spinning with ‘S’ and ‘Z’ twist (Optional)
- Precise control of twist per unit length (Optional)
- Provision for adjustable bobbin winding parameters such as traverse length and winding tension (Optional)

Other requirements

:

- User manual with detailed instructions for operation, maintenance, and troubleshooting
- Warranty for two years
- Essential spares and accessories for two years
- Machine in ready to run condition
- After sales support

#### 4. Fibre Extractor / Decorticator:

Type of Machine

: Regular Model with SS Guard

Capacity

:

- Capable of producing 15 -20 kg fibre per day
- Drum diameter 300 to 400 mm
- Blade width 20 to 25 mm
- Rotor blades – Hardened Alloy steel
- Guide / Safety Rolls – Stainless steel

Power Supply

: Single Phase -230 V AC -50 HZ

Other requirements

:

- User manual with detailed instructions for operation, maintenance, and troubleshooting
- Warranty for two years
- Essential spares and accessories for two years

- Machine in ready to run condition
- After sales support

### 5. Jigger Dyeing Machine:

Type of Machine	: Lab model suitable for training and R & D purpose
Capacity	: <ul style="list-style-type: none"> <li>• Fabric Width : upto 500mm</li> <li>• Length of the fabric: Up to 30mm thickness when wound on one of Rolls</li> <li>• Speed Control of Fabric – fixed speed</li> <li>• Volume of dye liquor – 3.5 to 6 Liters</li> <li>• Dye liquor heating – Through electric heater</li> <li>• Temperature, no. of passes, alarm systems</li> <li>• Electric supply – 220 / 230V, single phase, 50Hz</li> </ul>
Other requirements	: <ul style="list-style-type: none"> <li>• User manual with detailed instructions for operation, maintenance, and troubleshooting</li> <li>• Warranty for two years</li> <li>• Essential spares and accessories for two years</li> <li>• One extra set of electronic card (if any)</li> <li>• Machine in ready to run condition</li> <li>• After sales support</li> </ul>

### 6. Hank Dyeing Machine:

Type of Machine	: Lab model suitable for training and R & D purpose
Capacity	: <ul style="list-style-type: none"> <li>• Spindle Length – 600 mm,</li> <li>• Material: - S.S.316</li> <li>• Hinged hood for Easy Excess to Arm.</li> <li>• High Efficient Circulation Pump Made of S. S. 316, with Electric Motor and Mechanical Seal.</li> <li>• Mirror Polished Perforated Tubes with Dish Shapes Front and Rear Disc for Hassle Free Movement of the Yarn.</li> <li>• Rotating Hank Displacing Pipe fitted with Teflon Bushes.</li> <li>• Manual Control of Valves at Tube Inlets.</li> <li>• Electrical heating upto 4 Kw</li> <li>• Pneumatically operated Water Inlet and Drain valve.</li> </ul>

- Electrical Control Panel Along with Pneumatic Fittings, PC Programmer to Program Various Functions of the Machine
  - Digital Temperature Indicator
  - Suitable for Dyeing and Washing of Cotton, Nylon, viscous, silk in Hank
- Other requirements :
- User manual with detailed instructions for operation, maintenance, and troubleshooting
  - Warranty for two years
  - Essential spares and accessories for two years
  - One extra set of electronic cards (if any)
  - Machine in ready to run condition
  - After sales support

## 7. Padding Mangle :

Type of Machine : Lab model suitable for training and R & D purpose

Capacity :

- Working width: 450mm.
- Material of coating on bowl : synthetic rubber with rubber hardness : 65 to 70 shore hardness
- Fabric speed: up to 10 meter / minute.
- Electrical Supply – 220 / 230 V, single phase, 50Hz

Other requirements :

- User manual with detailed instructions for operation, maintenance, and troubleshooting
- Warranty for two years
- Essential spares and accessories for two years
- One extra set of electronic card (if any)
- Machine in ready to run condition
- After sales support

## 8. Sanitary Napkin Vending Machine :

Type of Machine : User friendly

Storage Capacity : 100 Pads

Other features :

- Coin Acceptor – Multiple Coin Acceptor with Adjustable coin selection

- Technology – Fully Automatic operation with multi value coin Acceptor
- Metal Enclosure: High quality steel with electro static powder coating
- Power Back Up: 24 Hrs
- Power Consumption: 40 Watts
- Power Indicators: Ready to use Wall Mounting
- User Friendly and Simple to Operate

Other requirements

:

- User manual with detailed instructions for operation, maintenance, and troubleshooting
- Warranty for two years
- Essential spares and accessories for two years
- One extra set of electronic card (if any)
- Machine in ready to run condition
- After sales support