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Government of Maharashtra
Skill, Employment, Entrepreneurship and Innovation Department

Directorate of Vocational Education and Training

Tender Document for Procurement of

Supply and Installation of Training Items for Mechanic Electric Vehicle Trade under Craftsman Training Scheme (CTS) at Consignee Locations

Tender No: TE-25001R2/2025 –2026

Last Date for Online Submission of Tender: 09/02/2026 upto 15:00 Hrs

Tender Price: Rs.30,000/-

E-Tendering Parent Portal: https://mahatenders.gov.in

Directorate of Vocational Education and Training
3, Mahapalika Marg, Elphinston Technical High School Campus, Metro Chouk, Mumbai 400001
Tel No. (022) 22620603/0604, Ext-5162/5163 ; E-mail: desk13@dvet.gov.in ; www.dvet.gov.in

TENDER NOTICE

Digitally sealed tenders (Two Bid System) as per e-tendering system are invited by office of Directorate of Vocational Education and Training (DVET), Maharashtra State, from reputed Manufacturers or Authorized Traders for the supply of following items required in various offices under the jurisdiction of the Directorate in Maharashtra State.

Tender Notice Details	
Tender Reference No	TE-25001R2/2025-26
Name of the Work/ Item	**Supply and Installation of Training Items for Mechanic Electric Vehicle Trade under Craftsman Training Scheme (CTS)at Consignee Locations**
Technical Specification of Items	Annexure A
Consignee wise Quantity of Items	Annexure B
Price of Tender Document and Mode of Payment	Rs. 30,000/- (Rupees Thirty Thousand Only) Non-refundable Online through https://mahatenders.gov.in
EMD and Mode of Payment	Rs. 2,25,000/- (Rupees Two Lakh Twenty-Five Thousand Only) Online through https://mahatenders.gov.in
Place of Pre-bid Meeting and Opening of Tender Offers	Conference Hall, 4th Floor Directorate of Vocational Education and Training 3, Mahapalika Marg, Elphinston Technical High School Campus, Metro Chouk, Mumbai 400001
Address for Communication	Desk 13 (Purchase Section) Directorate of Vocational Education and Training 3, Mahapalika Marg, Elphinston Technical High School Campus, Metro Chouk, Mumbai 400001
Contact Email ID	desk13@dvet.gov.in

Tender Schedule			
S.N.	**Event**	**Date**	**Time**
1	Online release of tender	24/01/2026	1000 Hrs
2	Pre-Bid Meeting	28/01/2026	1100 Hrs
3	Online submission End Date	09/02/2026	1500 Hrs
4	Opening of Technical Bid	10/02/2026	1500 Hrs
5	Opening of Commercial Bid	To be informed later *	

* Exact date of opening of Technical and Commercial bids shall be notified in the Tender section of the website www.dvet.gov.in before opening of the same. All bidder(s) interested in participating in the on-line e-Tendering process are required to regularly visit the website of the Directorate for getting updates about the tender process.

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DISCLAIMER

Directorate of Vocational Education and Training (DVET) is issuing this bid document for inviting bids for supply, installation and commissioning of store specified in the scope of the work. The Bid Document comprises of terms and conditions set forth in this bid document or that may be provided subsequently to bidder(s) whether in documentary form signed by the any authorized officers of DVET or on official websites of this directorate.

It is hereby clarified that this bid document is not an agreement and is not an offer or invitation by DVET to any parties hereunder. The purpose of this bid document is to provide the bidder(s) with information to assist in the formulation of their bids. While the bid document has been prepared in good faith with due care and caution, DVET do not accept any liability or responsibility for the accuracy, reasonableness or completeness of the information or for any errors, omissions or misstatements, negligent or otherwise, relating to any feasibility/detailed project report or any other reference document mentioned, implied or referred herein or pertaining to the scope of the work. This bid document may not be appropriate for all persons. It is not possible for DVET, to consider the investment objectives, financial situation, and particular needs of each bidder who reads or uses this bid document. Each bidder shall conduct its own investigations and analysis and shall check the accuracy, reliability, and completeness of the information in this bid document and where necessary obtain independent advice from appropriate sources.

Bidder shall carefully examine and analyze the bid document and bring to the notice of DVET any error, omission or inaccuracies therein that are apparent and to carry out its own investigation with respect to all matters related to this bid, seek professional advice on technical, financial, legal, regulatory and taxation matters and satisfy himself of consequences of entering into any agreement and/or arrangement relating to supply of store. DVET and its employees make no representation or warranty, express or implied and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of the information contained in the bid document or in any material on which this bid document is based or with respect to any written or verbal information made available to any bidder or its representative(s).

No representation or warranty is given as to the reasonableness of forecasts or the assumptions on which this bid document may be based. Liability therefore, if any, is hereby expressly disclaimed.

DVET may in their absolute discretion, but without being under any obligation to do so, update, amend or supplement the information in this bid document as per its requirements.

DEFINITIONS, ABBREVIATIONS AND ACRONYMS

In this tender document, the following terms shall be interpreted as indicated below:

1. "**Vendor or Contractor or Service Provider**" shall mean the successful bidder to whom the contract has been awarded and/or with whom the Tendering Authority signs the contract for rendering of goods and services.
2. "**Contract**" means the agreement entered into between the Tendering Authority and the Vendor, as recorded in the document signed by the parties, including all the attachments and appendices thereto, and all documents incorporated by the reference therein.
3. "**Bidder**" means any firm taking the full responsibility of managing the project as required in the tender. The word "Bidder" when used in the pre award period shall be synonymous with "Vendor" which shall be used after award of the contract.
4. "**The Contract Price**" means the price payable/receivable to the Successful Bidder under the Contract for the full and proper performance of its contractual obligations.
5. "**The Goods**" means the all the material, services, and repair and maintenance which the Vendor is required to supply to the Tendering Authority under the Contract. The word "The Goods" when used shall be synonymous with "The Store" which shall be used wherever possible.
6. "**The Services**" means services ancillary to the supply of the Goods, such as transportation, insurance, unloading, any other incidental services or any other obligations of the Vendor covered under the Contract.
7. "**Day**" means a working day.
8. "**Month**" means calendar month.
9. "**Week**" means seven consecutive days.
10. "**Tendering Authority**" means the Director, Directorate of Vocational Education and Training, Maharashtra State who has been authorized to issue a work order under this contract. The word "Tendering Authority" when used shall be synonymous with "The Purchaser" which shall be used wherever possible.
11. "**DVET**" means Directorate of Vocational Education and Training, Govt. of Maharashtra, 3, Mahapalika Marg, Mumbai 400001
12. "**EMD**" means Earnest Money Deposit. The word "EMD" when used shall be synonymous with "**The Bid Security**" which shall be used wherever possible.
13. "**Tender Opening Committee**" means the committee of officers appointed and authorized by the Tendering Authority.
14. "**Technical Evaluation Committee**" means the committee of experts appointed by the Tendering Authority.
15. "**PDI**" means the Pre-Dispatch Inspection.
16. "**Inspection Committee**" means the committee of experts appointed by the Tendering Authority who is entrusted the job of inspection.
17. "**ITI**" means Government Industrial Institutes in the state of Maharashtra.
18. "**Consignee**" means the any institutes or offices under the jurisdictions of DVET where the stores to be delivered.
19. "**Similar Machines**" means "Any equipment and machinery of the same group doing related/ comparable function.

Note: *Any words or terms which are not clearly defined in this tender document shall be clarified by the bidder before the submission of the bid.*

SECTION 1: INSTRUCTIONS TO BIDDER

1.1 Introduction

For and on behalf of Governor of Maharashtra, the Director, Directorate of Vocational Education and Training (DVET), Mumbai, herein after referred to as "Tendering Authority" invites digitally sealed tenders in two bid system for supply, installation and commissioning of Machinery and Equipment's specified in Scope of Works (Section-4) by e-Tendering process for the use in Government Industrial Training Institutes and Offices under jurisdiction of Directorate across the State of Maharashtra.

The quantities mentioned in the tender are only approximate estimated quantities. The Tendering Authority reserves the right to increase or decrease the quantities to be purchased without assigning any reason thereof.

To view Tender Notice, Detailed Time Schedule, Tender Document for this Tender and subsequently purchase the Tender Document and its supporting documents, kindly visit e-Tendering website of Government of Maharashtra: https://mahatenders.gov.in. The bidders participating first time for e-Tenders on Government of Maharashtra e-Tendering portal shall have to complete the Online Registration Process for the e-Tendering portal. All bidder(s) interested in participating in the online e-Tendering process are required to obtain Class II or Class III Digital Certificates. The tender shall be prepared and submitted online using individual's digital signature certificate.

1.2 Qualification Criteria

1.2.1 The bidder(s) who satisfies the following qualification criteria are only eligible to participate in the bid process. Offers received from the bidder(s) who do not fulfill all or any of the following qualification criteria are liable to be rejected at discretion of the Tendering Authority.

S.N.	Qualification Conditions	Supporting Documents to be submitted
PQ1	The bidder shall be a Registered Company/ Firm in India for at least 3 years.	1. Certificate of Registration / Incorporation/ Memorandum 2. PAN Card and / or 3. TAN Card
PQ2	The Bidder shall be an Original Equipment Manufacturer (OEM) or its Authorized Representative or Retailer.	1. If Bidder is Original Equipment Manufacturer: Manufacturing License, NSIC Certificate or equivalent. 2. If Bidder is Authorized Representative or Retailer: Manufacturers Authorization Form (MAF) from respective OEM authorizing bidder. The MAF should be provided from all OEMs for the items mentioned in **Annexure 16**
PQ3	Bidder's Annual Average Turnover for last three preceding financial years shall be **Rs 450 Lakh**	Bidder's turnover is the average of any three preceding financial years i.e. FY 2022-23, 2023-24, and 2024-25 certified by the chartered accountant of the company in the format prescribed in **Annexure 3** along with audited balance sheet
PQ4	OEM's Annual Average Turnover for last three preceding financial years shall be **Rs 675 Lakh**	1. OEM's turnover is the average of any three preceding financial years i.e. FY 2022-23, 2023-24 and 2024-25 certified by the chartered accountant of the company. 2. If the Bidder is Authorized Representative of OEM then the Bidder has to submit its own Turnover documents along with the Turnover documents of the OEM. 3. The Items for which OEM Turnover Criteria is applicable are mentioned in **Annexure 16**.

S.N.	Qualification Conditions	Supporting Documents to be submitted
PQ5	The Bidder should have last three preceding financial years i.e. FY 2022-23, 2023-24, 2024-25 experience for supplying similar items like Electric Vehicles, Electric Vehicle Training Equipment, Automobile Parts, Related products or services within the electric mobility sector, Hand Tool, Workshop Tool, Workshop/ Lab Equipment, Power Tool, Measuring Equipment, Engineering Items.	Self-certification by the Bidder on Stamp Paper (Notarized)
PQ6	OEM should have manufactured and supplied at least 50% of the Quantities/ Value of supplying similar category items to any Central/ State Government Organization/ PSU/ Public Listed Company in at least one of the last three preceding financial years i.e. FY 2022-23, 2023-24, 2024-25	For fulfilling both the criteria, any two of the following documents may be considered as valid proof for meeting the criteria. The details should be submitted as per format given in **Annexure 20:** 1. Purchase Order copy 2. Invoice(s) with self-certification by the bidder that supplies against the invoices have been executed. 3. Execution/ Installation certificate by client with order value. Any other document in support of order execution like Third Party Inspection release note, etc.
PQ7	The bidder shall have GST Registration Certificate	1. GST Registration Certificate 2. GST Returns for last completed quarter

1.2.2 The purchaser reserves the right to ask for any further documentary evidence to substantiate the fulfillment of the qualification criteria and also reserves the right to verify/evaluate the claims made by the bidder independently.

1.3 Purchase and Downloading of Tender Form

The tender document is uploaded/ released on Government of Maharashtra, (GOM) e-Tendering website http://mahatenders.gov.in. Tender document and supporting documents may be purchased and downloaded from link of Directorate of Vocational Education and Training and e-Tendering website of Government of Maharashtra http://mahatenders.gov.in by paying online. Subsequently, bid has to be prepared and submitted ONLINE ONLY as per the scheduled date and time. Tender forms shall not be sold/issued manually from DVET office.

1.4 Process of Submission of Tenders

Both the bids (Technical as well as Commercial) shall be submitted online. Tender(s) not submitted online shall not be entertained. All the documents shall be submitted online (In the form of PDF files/Scanned images in jpg format). These documents need to be digitally signed by individual bidder's digital signature and uploaded during online bid submission stage. Original copies shall be kept ready and shall be produced for verification on demand by the Purchaser.

1.5 Instruction for online submission

1.5.1 The bidder shall ensure that their tender is prepared before the expiry of the scheduled date and time and then submitted online before the expiry of the scheduled date and time. No delay on account of any cause shall be entertained. Tender(s) not submitted online shall not been entertained. If or any reason, any interested bidder fails to complete any online stages during the complete tender cycle, Tendering Authority shall not be responsible for that and any grievance regarding that shall not be entertained.

1.5.2 Tenders submitted without following Two Bid system and by without e-Tendering procedure shall be rejected.

1.5.3 The Two Bid offer must be submitted along with document(s) as per the guidelines given below by e-Tendering procedure only.

1.6 Deadline for submission of Tenders

Tender shall be submitted online on or before last date and time of submission as per schedule specified. However, the tendering authority may at his discretion, extend the deadline of submission of tenders before closing, by notifying it on official website of the Directorate. Bidder(s) are requested to visit official website till last date of submission of tender for any changes in this regards. No separate communication or publication shall be made in this regard.

1.7 Due Diligence

The bidder is expected to examine all instructions, forms, terms and conditions, and specifications that are provided in the bid document. The bids shall be precise, complete and in the prescribed format as per the requirement(s) of the bid document. Failure to furnish all information required by the bid document or submission of a bid not responsive to the bid document in every respect shall be at the bidder's risk and may result in rejection of the bid. The following needs to be considered while submitting the bid:

1.7.1 The date and time for online submission of bids shall strictly apply in all cases. The bidder shall ensure that their tender is prepared online before the expiry of the scheduled date and time and then submitted online before the expiry of the scheduled date and time. No delay on account of any cause shall be entertained. Offers not submitted online shall not be entertained.

1.7.2 If for any reason, any interested bidder fails to complete any of online stages during the complete tender cycle, tendering authority shall not be responsible for that and any grievance regarding that shall not be entertained.

1.7.3 The bid documents uploaded (and any additional information requested subsequently) shall bear the signature of the authorized signatory thereof on each page of the bid, except for the un-amended printed literature.

1.7.4 Tendering authority may, at its own discretion, extend the date and time for submission of bids. In such a case, all rights and obligations of tendering authority and the bidder(s) shall be applicable to the extended time frame.

1.7.5 The offers submitted as documents, by fax/email or any manner other than specified above, shall not be considered. No correspondence shall be entertained on this matter.

1.7.6 Printed terms and conditions of the bidder(s) shall not be considered as forming part of their bid.

1.7.7 The tender offer shall remain valid till 180 Days from the Date on Opening of Tender.

1.7.8 The payment against Tender cost and EMD shall be online mode only.

1.8 Clarification to Bid Document

The Tendering Authority shall hold a Pre-Bid Meeting with the Prospective Bidders. The date, time and place of the pre-bid meeting is mentioned in the Tender Schedule. The representatives of the prospective bidders may attend the pre-bid meeting at their own cost. The purpose of the pre-bid meeting is to provide a forum to the bidders to clarify their doubts/ seek clarification or additional information, necessary for them to submit their bid.

The bidders shall send in their pre-bid queries in the prescribed format as attached herewith as **Annexure 18** to the Tendering Authority at the address at which the bids are to be submitted and email on desk13@dvet.gov.in. The bidders shall send all their pre-bid queries in prescribed format on or before the pre-bid meeting

It is at the discretion of the Tendering Authority to respond to valid and appropriate queries raised before or during the Pr-Bid Meeting. If required, the corrigendum shall be issued. This corrigendum issued by the Tendering Authority shall become integral part of this Tender document.

1.9 Amendment to Bid Document

1.9.1 At any time until 7 days, before the deadline for submission of bids, tendering authority, may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the tender document by an amendment. All the amendments made in the document shall be published on the website https://mahatenders.gov.in

1.9.2 Any addendum/corrigendum as well as clarification thus issued shall be a part of the tender document(s) and it shall be assumed that the information contained in the amendment shall have been taken into account by the bidder in its tender. Separate notifications shall not be issued in the government gazette.

1.9.3 The bidder(s) are advised to visit the aforementioned website on regular basis for checking necessary updates. Tendering authority also reserves the rights to amend the dates mentioned in this tender document for bid process.

1.9.4 In order to afford prospective bidder(s) reasonable time in which to take the amendment into account in preparing their bids, tendering authority may, at its discretion, extend the last date for the receipt of bids by a reasonable period.

1.10 Non-Transferable

Not applicable since this is E-Tender.

1.11 Cost of Bidding

1.11.1 The bidder is responsible for all costs incurred in connection with participation in this process, including, but not limited to, costs incurred in conduct of informative and other diligence activities, participation in meetings/discussions/presentations, preparation of proposal, in providing any additional information required by tendering authority to facilitate the evaluation process, and in negotiating a definitive contract or all such activities related to the bid process. Tendering authority shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

1.11.2 This tender document does not commit tendering authority to award a contract or to engage in negotiations. Further, no reimbursable cost may be incurred in anticipation of award.

1.11.3 All materials submitted by the bidder become the property of tendering authority and may be returned at its sole discretion, provided, any materials which are identified as “proprietary and confidential material of bidder” shall remain the property of such bidder and the tendering authority shall maintain confidentiality of such materials.

1.12 Rejection of Bid

Tendering authority, reserves the right to accept/reject/release or relax any or all or part of the bids received on the due date/ opening of tender/at any stage of tendering process without assigning any reason whatsoever.

1.13 Language of Bid

The Bid and all correspondence documents related to the bid exchanged by the Bidder and the Tendering Authority shall be written in English language only. Supporting documents and printed literature furnished by the Bidder may, however, be in another language provided that they are accompanied by an accurate translation of the relevant passages in English language. Such accurate translation of the relevant passages or document shall be attested by the competent authority of the respective State/ Country and the English version shall prevail in case of dispute.

1.14 Bid Currency

Prices shall be quoted in Indian Rupees only.

1.15 Interlineations in Bid

Tenders containing interlineal shall not be considered. There shall be no Handwritten Material, corrections or interlineal in the offer. Technical details must be completely filled in. Filling up of the Technical Detail Form using terms such as “OK", "Accepted ", "Noted", " As given in brochure / Manual" is not acceptable. The Tendering Authority may treat offers not adhering to these guidelines as unacceptable.

1.16 Period of Validity of Bids

1.16.1 Validity period:

Bids shall remain valid up to 180 Days from the Date on Opening of Tender. The Tendering Authority reserves the right to reject a Bid as non-responsive if such Bid is valid for a period less than 180 Days from the Date on Opening of Tender and the Tendering Authority shall not be liable to send an intimation of any such rejection to such bidder(s).

1.16.2 Extension of Period of Validity:

The Tendering Authority may solicit the bidder’s consent for an extension of the period of Bid validity during or expiry of the validity. Any such request by the Tendering Authority and the response thereto shall be made in writing and such extension of Bid validity period by the bidder shall be unconditional and irrecoverable. A bidder accepting the request of Tendering Authority shall not be permitted to modify its Bid.

1.17 Contents of Envelops

Bidders shall submit Online Bid for Technical Bid and Commercial Bid. Online Technical Bid shall be filled up in the templates of Technical Envelop and Online Commercial Bid shall be filled up in the templates of Commercial Envelop.

1.17.1 Envelope No. 1: Technical Bid:

Technical bid shall include following document(s) to be submitted. Bidder shall submit all the following documents online by e-Tendering procedure. Purchaser may demand to provide original copies of documents which shall be submitted by the Bidder within stipulated time.

1.17.1.1 **A Covering Letter** as per **Annexure 1** on the official letter head of the bidder and duly signed copy with seal shall be uploaded on E-Tender website.

1.17.1.2 **Tender Fees**: The Tender Fees shall pay online mode only.

1.17.1.3 **Earnest Money Deposit (EMD)**:

The EMD shall submit online mode only.

a. **EMD Exemption:**
   As per Government Resolution of Industry Department, dated 01.12.2016.
b. **Discharge / Return of EMD:**
   EMD shall be discharged /returned to all bidder(s) within 30 days after award of contract to the successful bidder. Bidder shall not have been titled for any interest on EMD.
c. **EMD shall be forfeited:**
   i. If a bidder withdraws its tender during the period of bid validity as specified in the tender OR
   ii. In case of a successful tender, if the bidder fails to sign the contract in accordance with terms and conditions or to furnish security deposit.

1.17.1.4 **GST Registration Certificate:**

Attach GST Registration Certificate

1.17.1.5 **Manufacturer License:**

a. Manufacturing license for large scale industry issued by respective statutory authority or
b. Udyam Adhaar Memorandum and NSIC or equivalent in case of small and medium scale industry
c. The license must have been renewed and valid for the financial year 2025-26
d. The tendering authority reserves the right to ask for any further documentary evidence to establish genuineness of manufacturer.

1.17.1.6 **Manufacturer Authorization Certificate:**

In case the Bidder is Authorized Representative then recent authorization certificate from manufacturer in **Annexure 2** stating that they shall supply the equipment through the bidder and shall attend all service calls during warranty period. This certificate is not required if the bidder is manufacturer.

1.17.1.7 **Details of Manufacturing Facilities:**

The OEM must have manufacturing capacity of manufacturing/producing machines of the similar type in minimum number of the quantity specified in qualification requirements in each of last three preceding years. Details of staff, machinery, manufacturing capacity etc. as per the format prescribed in **Annexure 5** must be submitted.

1.17.1.8 **Annual Turnover Certificate of Bidders:**

a. In case the Bidder is Original Equipment Manufacturer:
   Annual Turnover Certificate of the Manufacturer for last three preceding financial years (2022-23, 2023-24, 2024-25) having minimum average turnover as specified in qualification criteria in the format as prescribed in **Annexure 3** must be submitted.

b. In case the Bidder is Authorized Representative:

   i. Annual Turnover Certificate of the Bidder for last three preceding financial years (2022-23, 2023-24, 2024-25) having minimum average turnover as specified in qualification criteria in the format as prescribed in **Annexure 3** must be submitted.

   ii. Annual Turnover Certificate of the Manufacturer (who has Authorized the Bidder) for last three preceding financial years (2022-23, 2023-24, 2024-25) having minimum average turnover as specified in qualification criteria in the format as prescribed in **Annexure 3** must be submitted.

1.17.1.9 **Details of the Bidder:**

The details of the bidder must be duly filled and signed by authorized person of the firm must be submitted as per the format prescribed in **Annexure 4.**

1.17.1.10 **Technical Compliance and No Deviation Statement:**

a. The bidder shall carefully read and understand the technical specifications given in the bid document. The bidder must comply quality requirements, packing, applicable standards, Acts and Rules including the mandatory requirements of the tender without any deviation. The bidder must submit his technical offer Online on E-tendering web portal as per e-Tendering procedure in a form at prescribed in the tender.

b. Brief compliance on item-by-item parameter using words like: "…. shall be provided/As per BIS/Complied/As per specification/Available/As per Literature/As per requirements etc." are not acceptable and that bid shall be categorized as incomplete and rejected.

c. The bidder must submit "**NO DEVIATION STATEMENT**" mentioning the Make/ Model of the item quoted in the bid. No Deviation statement of specification of the equipment shall be offered giving details of specification in the **Annexure 8.** Bidder must give details in this **Annexure 8** and mere certification that 'There is no deviation between tender specifications and specifications quoted by the bidder. Bid without Technical Specification Compliance and No Deviation Statement is not acceptable and such bids shall be rejected and shall be made non-responsive.

1.17.1.11 **Technical Literature of the Equipment and Machinery:**

The scan copies of original Relevant Technical literature/Catalogue highlighting products features offered in the Tender shall be submitted.

1.17.1.12 **ISO/BIS/ISI/CE Mark Certificate:**
ISO/BIS/ISI/CE Mark Certificate or similar is preferred for offered product.

1.17.1.13 **Undertaking of Delivery within prescribed Delivery Period:**
The bidder must submit the undertaking that the stores shall be delivered within the prescribed delivery period at the consignee locations free of cost including installation, demonstration, satisfactory trial and shall provide service during warranty period. This undertaking is covered in the covering letter.

1.17.1.14 **Undertaking for Demo and Provide Sample:**
DVET may ask for a sample of specific product offered to Seller (After Issuing Acceptance of Tender); which shall be submitted within 7 days on such request; and carry out inspection and tests by its experts or from any Government approved labs. All costs related to inspection and tests in Government approved labs shall be borne by the bidder. If any destructive test is carried out, the sample will not be returned to the bidder.

1.17.1.15 **Undertaking about Risk Purchase, Fall Clause and Penalty Clause:**
The bidder must submit the undertaking for acceptance of Risk Purchase, fall clause and Penalty clause duly signed by the authorized person of the firm.

1.17.1.16 **Test Report:**
Test Report from Govt. Laboratory prescribed in Schedule VIII of Govt. Resolution, dated 01-12-2016 from Industry, Energy and Labour Dept., Govt. of Maharashtra, shall be required to be submitted to Bidder **whenever demanded**.

1.17.1.17 **Declaration:**
The bidder has to give an undertaking that their firm has not been found guilty of malpractice, misconduct or blacklisted/debarred either by Government of Maharashtra or by other State Government/Central Government's organizations in the past and also there is no such proceedings against them. The bidder shall also undertake that they have not failed to meet its commitment against valid purchase orders issued by this Directorate in any of the last three preceding years unless such delay was duly condoned by DVET / Govt. of Maharashtra accepting the reasons furnished by the bidder for such delay. The bidder must also give any other undertaking if specified by the purchaser. These undertaking must be made on Non-Judicial Stamp Paper of Rs. 500/- as per the format prescribed in **Annexure 12**.

1.17.1.18 **Power of Attorney:**
Power of attorney to the responsible person of the bidder to sign the bid and transact the business with the Tendering Authority must be submitted as per **Annexure 13**. The Responsible person must be an employee of the bidder and shall be in a position to make any decision pertaining to this tender on behalf the bidder. The bidders are not allowed to authorize third party person for transacting the business with the tendering authority.

1.17.1.19 **: Undertaking for Mobilization of Instructors and Training of Instructors**
The bidder must submit an undertaking as per format prescribed in **Annexure 17** for mobilizing qualified training instructors to DVET when it demands on contractual basis as specified in Scope of Work mentioned at Section 4, Clause 4.1.3. This undertaking must be made on Non-Judicial Stamp Paper of Rs. 500/- and duly notarized.

1.17.2 Envelope No. 2: Commercial Bid:

1.17.2.1 Commercial bid shall only contain price information as per **Annexure 7** – Price Schedule. The commercial bid shall be provided in the template designed in commercial envelope of online tendering system.

1.17.2.2 The commercial bid shall be on fixed price basis, inclusive of all taxes. Price quotation accompanied by vague and conditional expressions such as "subject to

immediate acceptance", “subject to confirmation” etc. shall be treated as being at variance and shall be liable for rejection.

1.17.2.3 The unit price inclusive of all taxes shall also be submitted for total items and quantity of materials to be supplied as per the template.

1.18 Opening of Tender

Tender shall be opened on the date and time specified in tender notice and therefore bidder or its authorized representative is encouraged to be present at the time of opening of tender. The Envelope No. 1: Technical Bid and Envelope No. 2: Commercial Bid of each tender shall be prepared by e-Tendering procedure only.

1.18.1 Opening of Technical Bid (T1):

1.18.1.1 Envelope No.1: Technical Bid shall be opened Online through E-Tendering procedure, to verify its contents as per requirements, on the date specified in Tender notice in presence of bidder(s) or their Authorized representatives. If the various documents contained in the envelope do not meet the requirements, a note shall be recorded accordingly by the tender opening committee and the said bidder(s)’s commercial envelope shall not be considered for further action but the same shall be recorded. Decision of the tender opening committee shall be final in this regard.

1.18.1.2 Envelope No. 1: Technical Bid of each of tender shall be opened in the order in which they have been received in presence of the tender opening committee and bidder or its authorized representative Bye-Tendering procedure only.

1.18.1.3 After opening of Technical Bid of each of bidder, availability of all the documents uploaded there in shall be verified. All such Technical Bid containing each and every document(s) shall be taken for further technical evaluation.

1.18.1.4 In case of any Technical Bid where any of the document(s) is found to be missing or deficient with regard of format or manner shall be treated as Non Responsive. All such bids shall be summarily rejected and shall not be considered for further evaluation. However, Tendering Authority may give time for complying the deficiencies. If the deficiencies don’t come in within stipulated time period, then the bids shall be summarily rejected and shall not be considered for further evaluation.

1.18.2 Evaluation of Technical Bid:

1.18.2.1 The Technical Evaluation Committee shall scrutinize the document(s) mentioned above for its eligibility, validity, applicability, compliance and substantiation stipulated in tender document.

1.18.2.2 The Technical Scrutiny Committee shall also analyze that there is no collusive or fraudulent practice involved in the entire tendering process amongst all the tenders received.

1.18.2.3 The technical evaluation shall be on the basis of submitted substantiation document(s) Any tender during the evaluation process do not meet the tender conditions laid down in the tender document shall be declared as not acceptable and such tenders shall not be considered for further evaluation.

1.18.2.4 Deviations are generally not allowed. However, in the case of deviations, if such deviations add to the performance and quality of the item, then the decision of the Technical Evaluation Committee shall be final.

1.18.2.5 To assist in the examination, evaluation and comparison of Bids Tendering Authority may, at its discretion, ask the bidder for a clarification of its Bid. The request of clarification and the response shall be in writing and no change in the price of substance of the Bid shall be sought, offered or permitted.

1.18.2.6 Preliminary scrutiny shall be made to verify the

a. Completeness of Bid
b. Computational Errors

c. Tender Fee, Earnest Money Deposited (EMD)
d. Required documents have been properly signed
e. All Bids are in required order

1.18.2.7 If a bid is not substantially responsive, it shall be rejected by the Tendering Authority and shall not subsequently be made responsive by the bidder by correction of the nonconformity.

1.18.2.8 **The bid shall be evaluated in the following sub-steps:**

a. **In the First Step**, the documentation furnished by the Bidder shall be examined prima facie to see if the technical skill base and financial capacity and other Vendor attributes claimed therein are consistent with the needs of this tender.
b. **In the Second Step**, the Tendering Authority may ask the bidder(s) for additional information, visit to Bidder(s) site and/or arrange discussions with their Professional, Technical Faculties to verify claims made in Technical Bid documentation. If it is found that the documents submitted by the bidder are not compatible with the actual situation at site, or if the document supplied by the bidder are found to be fraudulent or misrepresenting the facts, it shall render the bidder ineligible for further participation in the tender process. The decision of the Tender Evaluation Committee in this regard shall be final and binding on the bidder and cannot be challenged.
c. **In the Third Step**, the Tendering Authority may, ask the prospective bidder(s) for the presentation and or demonstration regarding Technical Capability of the Bidder(s) and understanding regarding the Project. The decision of the Tender Evaluation Committee in this regard shall be final and binding on the bidder and cannot be challenged

1.18.3 Opening of Commercial Bid (C1):

1.18.3.1 Envelope No. 2: Commercial Bid (C1) shall be opened after opening of Envelope No. 1: Technical Bid only for the bidder(s) who's Envelope No. 1: Technical Bid found to be in accordance with the tender conditions stipulated in tender document. The tentative date and time for opening of Envelope No.2 shall be communicated subsequently to the eligible bidder(s).

1.18.3.2 This envelope shall be opened online as per the date and time given in detailed tender schedule or communicated subsequently after technical evaluation, through e-tendering procedure only. The Envelope No. 2: Commercial Bid shall not be opened till the completion of evaluation of Envelope No. 1: Technical Bid. Envelope No. 2: Commercial Bid of only technically qualified bidder as mentioned above shall be opened in the presence of the eligible bidder(s). No communications shall be made with the non-responsive bidders.

1.18.3.3 The Bid Price shall be permissible within the range of Estimated Cost as prescribed by procurement policy vide Government Resolution dated 1st December, 2016 clause no. 3.1.2.1

1.18.4 Prices:

1.18.4.1 The prices quoted and accepted shall be binding on the bidder and must be valid for a period of validity.

1.18.4.2 Rates shall be quoted for each of the required item separately on door delivery basis according to the unit asked for strictly as per the format of Price Schedule given as **Annexure 7**. Tender for the supply of item quoted in the bid with conditions like "AT CURRENT MARKET RATES" shall not be accepted. The purchaser shall not be responsible for damages, handling, clearing, transport charges etc. Conditional tenders shall not be accepted and liable for rejection.

1.18.4.3 To ensure sustained supply without any interruption the purchaser reserves the right to split orders for supplying the requirements amongst more than one

bidder provided that, the rates and other conditions of supply are same.

1.18.5 Evaluation of Commercial Bid:

1.18.5.1 After opening of Envelope No.1: Technical Bid by E-Tendering procedure on the scheduled date, time and venue, the Evaluation Committee shall examine the contents of the tender received along with all prescribed mandatory document(s).

1.18.5.2 The Tendering Authority may at its discretion discuss with the Bidder(s) to clarify contents of their financial offer.

1.18.5.3 The Tendering Authority may at its discretion discuss with the lowest bidder so as to meet its expectation of a cost effective sustainable and economically promising solution.

1.18.5.4 The Tendering Authority reserves the right to open Commercial Bid even if one Bidder qualifies or if only one Bid is received in response to the Tender Notice.

1.18.5.5 The commercial bid shall be evaluated on the basis of cost effectiveness of the solution. The bidder whose commercial offer has been determined to be economical shall be selected finally subject to the discretion of the tendering authority.

1.18.5.6 The lowest Bidder shall be calculated on basis of **evaluation of Total Cost for the entire bill of quantity mentioned in the Bid**.

1.18.5.7 The purchaser reserves the right to split the order if need arises. The purchaser reserves the right to increase or decrease the quantity to be purchased and also reserves the right to cancel or revise or any of the all the tenders or part of tenders without giving any reason thereto with no cost to the purchaser

1.18.5.8 The decision of the Committee in the evaluation of the Technical and Commercial bids shall be final. No correspondence shall be entertained outside the process of negotiation/discussion with the Committee.

1.19 Contacting the Tendering Authority

1.19.1 No Bidder shall contact the Tendering Authority on any matter relating to its bid; from the time of the bid opening to the time the contract is awarded. If he wishes to bring additional information to the notice of the Tendering Authority, he shall do so in writing. The Tendering Authority reserves the right as to whether such additional information shall be considered or otherwise.

1.19.2 Any effort by a Bidder to influence the Tendering Authority in its decision on bid evaluation, bid comparison or contract award may result in disqualification of the Bidder's bid and also forfeiture of his Earnest Money Deposit amount.

1.19.3 Only duly authorized person by the bidder who is an employee of the bidder organization shall be allowed to participate in opening of tender. Third party person shall not be allowed as an authorized person of the bidder organization. If it is found at any stage of the tendering process that the bidder has authorized third party person, then the bid of such bidder shall lead to disqualification and shall be made non-responsive for further process.

1.20 Corrupt or Fraudulent Practice

1.20.1 "**Corrupt Practice**" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement processor in contract execution; and

1.20.2 "**Fraudulent Practice**" means a misrepresentation or omission of facts in order to Influence a procurement process or the execution of a contract to the detriment of purchaser and includes collusive practice among Bidder(s) (prior to or after tender submission) designed to establish tender prices at artificial non-competitive levels and to deprive the Purchaser of the benefits of free and open competition.

1.20.3 "**Collusive Practice**" means a scheme or arrangement between two or more bidder(s), with

or without the knowledge of the Purchaser, designed to establish tender prices at artificial, non-competitive level; and

1.20.4 "**Coercive Practice**" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or effect the execution of the contract.

1.20.5 The Tendering Authority requires that the bidder(s)/ suppliers/ contractors under this tender observe the highest standards of ethics during the procurement and execution of such contracts.

1.20.6 Any effort by the bidder to influence the purchaser in the bid evaluation, bid comparison, or contract award decisions may result in the rejection of the bidder(s) bid.

1.20.7 The bidder must not have failed to meet its commitment against valid purchase orders issued by this Directorate in any of the last three years unless such delay was duly condoned by this Directorate/Govt. of Maharashtra accepting the reasons furnished by the bidder for such delay.

1.20.8 Offers from Manufacturers or Authorized Dealers for an item(s) for which that Manufacturer has been found guilty of malpractice, misconduct, or blacklisted/ debarred either by Government of Maharashtra or by other State Government/ Central Government's organizations shall be rejected.

1.20.9 The Tendering Authority shall reject a tender for award if it determines that the bidder recommended for awards has directly or through an agent engaged in corrupt or fraudulent practice in competing for the contract in question. The Tendering Authority shall declare a firm or individual as ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that they have, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for, or in executing, a contract.

1.21 Misrepresentation

In case of any misrepresentation or concealing facts regarding performance, the Tendering Authority shall reject the tender at any stage of the bid evaluation process and may debar the said firm from participating in any tenders issued by Tendering Authority for a specific period.

1.22 Notification of Award

1.22.1 The Tendering Authority shall consider placement of orders for commercial supplies on those bidder(s) whose offers have been found technically, commercially and financially acceptable and whose goods have been approved/validated by the Tendering Authority.

1.22.2 The Tendering Authority reserves the right to counter offer price(s) against price(s) quoted by any bidder.

1.22.3 Prior to expiration of the period of bid validity, the Tendering Authority shall notify the successful bidder in writing that its bid has been accepted. Successful Bidder shall be informed about the intention of award of contract (Acceptance of Tender) by sending an Advance Letter of Acceptance Order. On acceptance of Terms and conditions of letter of acceptance and submission of security deposit, Purchase Order shall be released.

1.22.4 Upon the successful bidder's furnishing of Performance Security /Security Deposit, the Tendering Authority shall promptly notify each unsuccessful bidder and shall discharge their EMD.

1.22.5 The purchaser shall place supply orders on staggered basis, if necessary, during the contract period to the lowest evaluated responsive bidder and shall be governed by all the terms and conditions stipulated in the tender document.

1.22.6 The purchaser reserves the right to split the order if need arises. The purchaser reserves the right to increase or decrease the quantity to be purchased and also reserves the right to cancel or revise or any of the all the tenders or part of tenders without giving any reason

there to with no cost to the purchaser.

1.23 Security Deposit and Contract Agreement

Security deposit shall be **5% of the value of goods** ordered and shall be retained by the purchaser for the duration of warranty period plus additional 6 months from the date of issue of purchase order. In case there is delay in supply and purchaser has extended the delivery period, the retention period of security deposit shall have to be extended accordingly. Security deposit shall be released after expiry of warranty period subject to clearance from the consignee institute.

The security deposit shall be in the form of **Bank Guarantee** in favor of "**Director of Vocational Education and Training, Mumbai**" from any Nationalized or scheduled Bank as per format at prescribed in **Annexure 9**.

1.23.1 Security deposit shall be forfeited as a compensation for any loss resulting from the failure to perform the obligations under the contract or in the event of termination of the contract or in any event as the Purchaser thinks fit and proper.

1.23.2 The successful bidder shall be required to enter into agreement for the due performance of Contract as per format prescribed in **Annexure 10**.

1.24 Binding Clause

All decisions taken by the Tendering Authority regarding the processing of this tender and award of contract shall be final and binding on all parties concerned. The Tendering Authority, reserves the right:

1.24.1 To vary, modify, revise, amend or change any of the terms and conditions in this Bid.

1.24.2 To reject any or all the tender/s without assigning any reason whatsoever thereof or to annul the bidding process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected bidder(s) or any obligation to inform the affected bidder(s) of the grounds for such decision.

1.24.3 The quantities mentioned in the tender are only approximate estimated quantities. The Director, Directorate of Vocational Education and Training, Mumbai reserves the right to increase or decrease the quantities, to be purchased without assigning any reason thereof.

1.25 Conditional Tender

Hypothetical, ambiguous or Conditional tenders shall be summarily rejected. No change of any kind shall be made in the Tender or format Annexed herewith. In-adequate information or change in format could lead to disqualification of the bid.

1.26 Annulment of Award

1.26.1 Failure of the successful bidder to comply with the requirement of terms and conditions of the tender document shall constitute sufficient ground for the annulment of the award and forfeiture of the EMD in which event the Purchaser may make the award to any other bidder at the discretion of Purchaser or call for new bids.

1.26.2 While all the conditions specified in the Bid documents are critical and are to be complied, special attention of bidder is invited to the following clauses of the bid documents. Noncompliance of any one of which shall result in rejection of the bid.

1.26.3 The bids shall be rejected at opening stage if Tender Price and EMD is not submitted

1.26.4 If clause-by-clause compliance in form of signing and stamping all the pages of the original bid by the authorized person(s) are not given, the bid shall be rejected.

1.27 Interpretation of the Clauses

In case of any ambiguity in the interpretation of any of the clauses in Tender Document or the Contract Document, the Tendering Authority's interpretation of the clauses shall be final and binding on all parties.

SECTION 2: GENERAL CONDITIONS OF THE CONTRACT

2.1 Applications of these Conditions

These conditions shall apply to the extent that provisions in other parts of the Contracts do not supersede them.

2.2 Document Establishing Good Conformity to Bid Document

2.2.1 The Tender Document (along with its amendments if any), the Bid of the Vendor, any clarifications sought by the Tendering Authority, the responses provided by the Vendor, and any other correspondence exchanged shall form part of the contract to the extent the same is not inconsistent with this document and the award document to the Vendor

2.2.2 The documentary evidence in conformity with the Bid Documents may be in the form of literature and data and shall furnish a clause-by-clause compliance on the tendering authority technical specifications and commercial conditions demonstrating substantial responsiveness to the Technical Specification and commercial conditions in the form of signing and stamping all the pages of the original bid document by the authorized person/persons. In case of deviations the bidder shall give a statement of deviations and exceptions to the provision of the Technical Specifications and commercial conditions. A bid without clause-by-clause compliance shall not be considered.

2.2.3 For purposes of compliance to be furnished pursuant to clause above the bidder shall note that the standards for workmanship, material and equipment and reference to brand names or catalogue number, designated by the purchaser in its Technical Specifications are intended to be descriptive only and not restrictive.

2.3 Safety Requirements

The Vendor shall abide by the job safety measures prevalent in India and shall free the Tendering Authority from all demands or responsibilities arising from accidents or loss of life, the cause of which is the Vendor's negligence. The Vendor shall pay all indemnities arising from such incidents and shall not hold the Tendering Authority responsible or obligated.

2.4 Vendor's Obligations

The Vendor is responsible for, and obliged to conduct all contracted activities as defined in the scope of work or wherever contained in this document, in accordance with the Contract. The Vendor is obliged to work closely with the staff of the Tendering Authority and abide by directives issued by them.

2.5 Change Orders

2.5.1 The Tendering Authority may at any time, by written order given to the Vendor, make changes within the general scope of the Contract in any one or more of the following:

2.5.1.1 Drawings, designs, or specifications under the Contract that are to be specifically developed for the Tendering Authority;

2.5.1.2 The services to be provided by the Vendor.

2.5.2 If any such change causes an increase or decrease in the cost of, or the time required for the Vendor's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended.

2.5.3 Any claims by the Vendor for adjustment under this clause must be asserted within thirty (30) days from the date of the Vendor's receipt of the Tendering Authority's change order.

2.5.4 Expert Committee constituted with members of eminent Public Institutions and the Members having experience in related fields shall validate all such claims. The rate applicable for such adjustment is as fixed by Expert Committee.

2.6 Use of Contract Documents and Information

2.6.1 The Vendor shall treat as confidential all data and information about the Tendering Authority, obtained in the execution of his responsibilities, in strict confidence and shall not reveal such information to any other party without the prior written approval of the Tendering Authority.

2.6.2 The Vendor shall not, without the Tendering Authority's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Tendering Authority in connection therewith, to any person other than a person employed by them in performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only as far as may be necessary for purposes of such performance.

2.6.3 Any document, other than the contract itself, shall remain the property of the Tendering Authority and shall be returned (in all copies) to the Tendering Authority on completion of the Vendor's performance under the Contract if so required by the Tendering Authority.

2.6.4 The Vendor must act in good faith and at all times extend its fullest cooperation to the Tendering Authority, its employees and agents during the performance of the Services.

2.6.5 The Vendor shall act with appropriate propriety and discretion and in particular shall refrain from making any public statement concerning the Project or the Services without prior approval of Tendering Authority.

2.6.6 The Vendor shall refrain from disclosing or publicizing to its clientele including past and prospective clients or to the public that it has provided Services to the Directorate without prior approval of the Tendering Authority.

2.6.7 The Vendor shall not divulge to any person not authorized by the Directorate and shall not use for its own purposes, any information concerning the Tendering Authority, its staff or the Project which the Vendor may have access to directly or indirectly from the services performed under this Agreement or otherwise during the course of the Project; strict confidentiality shall be maintained by the Vendor and its employees/agents in respect of the information provided by the Directorate to the Vendor

2.6.8 This confidentiality clause shall be applicable not only to existing employees of the Vendor but also to its employees involved in the project who may leave the service of the Vendor, and accordingly, it shall be the responsibility of the Vendor to ensure that any such employee also shall not divulge or use any such information for his/her own purpose.

2.6.9 The Vendor shall have no authority to commit the Tendering Authority to any additional costs, fees or expenses in connection with the Project.

2.6.10 The vendor shall report immediately to the Tendering Authority any circumstances or events which might reasonably be expected to impair or prejudice the performance of the Services.

2.6.11 All data, reports, notes, drawings, specifications, statistics, plans and other documents and data compiled or made by the Vendor while performing the Services shall be the exclusive property of the Tendering Authority and the Vendor shall have no copyright or other interest therein, and upon sooner determination of the contract or Termination of the Engagement, the said documents and records shall be submitted to the Tendering Authority or disposed of as Tendering Authority may direct.

2.6.12 The Vendor shall at all-time refrain from showing the report/work in progress or the completed report/work to any person not authorized by the Tendering Authority.

2.6.13 The Vendor shall make available to the Tendering Authority documents and records related to the performance of the Vendor for verifying the authenticity of the claims made

2.7 Responsibilities

2.7.1 Vendor shall be responsible for the following activities during the period of agreement

2.7.2 Completion of the work as mentioned in the Scope of the work

2.7.3 The Tendering Authority shall be responsible for the following activities during the course of the assignment:

2.7.3.1 Provide information/data/clarifications issues.

2.8 Financial and Legal Liabilities

The Vendor shall be solely responsible for any financial issues arising out of the result of this Contract. Any financial loss to Tendering Authority, due to faulty functioning as a result of this tender, shall be sole responsibility of vendor and he has to fulfill all claims arising out of this problem.

2.9 Indemnity

The Bidder shall indemnify Tendering Authority from and against any costs, loss, damages, expenses and claims including those from third parties or liabilities of any kind howsoever suffered arising or incurred interlay during and after the contract period out of: ¬

2.9.1 Any negligence or wrongful act or omission by the Bidder or any subcontract or third party in connection with or incidental to this contract or

2.9.2 Any breach of any of the terms of this contract by all Vendors or any sub-contract or third party.

2.10 Standards of Performance

The Vendor is liable to complete the work in accordance with the specification and approved International standard according to related Laws, Rules and Regulations.

2.11 Default Clause / Cancellation on failure to supply

If the supplier fails to commence delivery as schedule or to deliver the quantities ordered to him within the delivery period stipulated in the contract, it shall be discretion of the purchaser either. (a) to extend the delivery period or (b) to cancel the contract in whole or in part for the unsupplied quantities without any show cause notice. In the event of extension, liquidated damages, shall be applicable. If the purchaser decides to cancel the contract, the mode of repurchase shall be at the discretion of the purchaser. The supplier shall be liable to pay any loss by way of extra expenditure or other incidental expenses, which the purchaser may sustain on account of such repurchase at the risk and cost of the supplier. In addition to action above, the purchaser may propose the defaulting supplier for blacklisting from future orders.

2.12 Termination for Insolvency

The Tendering Authority may at any time terminate the Contract by giving written notice to the Vendor, if the Vendor becomes bankrupt or otherwise insolvent. In this event, termination shall be without compensation to the Vendor, provided that such termination shall not prejudice or affect any right of action or remedy, which has accrued or shall accrue thereafter to the Tendering Authority.

2.12.1 The Tendering Authority may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Vendor, terminate the Contract in whole or part: ¬

- 2.12.1.1 If the Vendor fails to deliver any or all of the Goods within the period(s) specified in the Contract,
- 2.12.1.2 If the Vendor fails to perform as per the Quality standards and as per the Scope of the Work
- 2.12.1.3 If the Vendor, in the judgment of the Tendering Authority has engaged in corrupt or fraudulent practices in competing for or in Executing the Contract. For the purpose of this clause the definition for corrupt practice and fraudulent practice shall be as per the law.

2.12.2 The Tendering Authority may also at its sole discretion accept full or part work and also reserves the right to delete any items from the scope of the work.

2.12.3 The Tendering Authority may, without prejudice to any other remedy for breach of contract, by written notice sent to the Vendor, without assigning any reason may terminate the

Contract in whole or part: if the tendering authority satisfies that the services of the Vendor are no more required or Vendor is not executing its services properly.

2.12.4 If the Vendor after submission of Bid and due acceptance of the same i.e. after placement of order fails to abide by the terms and conditions of the tender document or fails to execute the work as per the prescribed schedule given or at any time repudiates the contract, the tendering authority shall have the right to forfeiture the EMD, invoke performance security deposited by the firm and get the work done from other vendor at the risk and consequences of the first vendor. The cost difference between the alternative arrangements and vendor's bid value shall be recovered from the firm along with other incidental charges including transportation, taxes, etc.

2.12.5 In case of failure by the bidder to carry out the job in accordance with provisions of the contract and as per the Scope of the Work, the tendering authority shall have right to cancel the contract and award it to any other vendor and any loss sustained there by shall be recoverable from the first vendor.

2.13 Consequences of Termination

2.13.1 In circumstances mentioned above, the Tendering / Implementing Authority shall exercise the following steps: ¬

- 2.13.1.1 Ask the Vendor to leave the job and return the entire material in an "as is where is" condition, and / or,
- 2.13.1.2 Shall forfeit the Security Deposit obtained as performance Guarantee.
- 2.13.1.3 Shall take appropriate steps in terms of remedies for breach of contract under relevant provisions of law.

2.13.2 Purchaser reserves the right to disqualify the Vendor for a suitable period who habitually failed to supply the services in time.

2.13.3 Further, the Vendor whose services do not perform satisfactory in the field in accordance with the specifications may also be disqualified for a suitable period as decided by the tendering authority.

2.13.4 Tendering Authority reserves the right to blacklist a bidder for a suitable period in case he fails to honor his bid without sufficient grounds.

2.14 Condition as per government resolution dated 01.12.2016

2.14.1 Force Majeure:

"If, at any time, during the continuance of this contract the performance in whole or in part by either party of any obligation under this contract shall be prevented of delayed by reason of any war, hostility, acts of the public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restriction, strikes, lock-outs or acts of God (hereinafter referred to as "events"), provided notice of happening of any such eventuality is given by either party to the other within 21 days from the date of occurrence thereof, neither party shall by reason of such event, be entitled to terminate this contract nor shall either party have any claim for damages against the other in respect of such non-performance or delay in performance; and deliveries under the contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist, and the decision of the purchasing officer as to whether the deliveries have been so resumed or not, shall be final and conclusive, provided further that if the performance in whole or part of any obligation under this contract is prevented or delayed by reason of any such event for a period exceeding 60 days, either party may at its option terminate the contract **PROVIDED ALSO** that it the contract is terminated under this clause, the purchaser shall be at liberty take over from the contract at a price to be fixed by the purchasing Officer which shall be final all unused, undamaged and acceptable materials, bought out components and stores in course of manufacture in the possession of the contractor at the time of such termination or such portion thereof as the purchaser may deem fit accepting such material, bought out components and stores as the contractor may with the concurrence of the purchaser elect to retain.

Important factors relating to placement of contracts Force Majeure Clause: The force majeure clause in the following form only (which shall not form part of the general conditions of contracts) shall be included in such contracts where the suppliers specifically insist on the provision of a force majeure clause and there is no alternative but to accept the same. This clause shall not be incorporated in the Invitation to Tender, but prior to acceptance of an offer in such a case the supplier shall be asked to accept this clause as governing conditions of force majeure.

2.14.2 Risk Purchase:

The contractor fails to deliver the stores of any installment thereof within the period fixed for such delivery or at any time repudiates the contract before the expiry of such period, the Government is entitled to cancel the contract and repurchase the stores not delivered at the risk and cost of the defaulting contractor. In the event of such a risk purchase, the defaulting contractor shall be liable for any loss which the Government may sustain on that account provided the purchase, or if there is an agreement to purchase, such agreement is made, in case of default to deliver the stores by the stipulated delivery period, within six months from the date of such default and in case of repudiation of the contract before the expiry of the aforesaid delivery, within six months from the date of cancellation of the contract.

2.14.3 Fall Clause:

It is a condition of the contract that all through the currency thereof, the price at which Successful bidder will the supply stores should not exceed the lowest price charged by Successful bidder to any customer during the currency of the rate contract and that in the event of the prices going down below the rate contract prices Successful bidder shall promptly furnish such information to DVET to enable to amend the contract rates for subsequent supplies. If it is observed that such event happens, the difference between lowest price charged by Successful bidder to any other customer and price charged by Successful bidder to DVET is deducted and in addition to this 5 % penalty on purchased order is deducted.

2.15 Resolution of Disputes

2.15.1 The Tendering Authority and the Vendor shall make every effort to resolve amicably by direct informal negotiations any disagreement or dispute arising between them in connection with the contract.

2.15.2 If, after thirty (30) days from the commencement of such informal negotiations, the Tendering Authority and the Vendor have been unable to resolve amicably a contract dispute, all such disputes, differences, claims and demands arising under the contract shall be referred to arbitration of a sole Arbitrator to be appointed by the Govt. of Maharashtra and his decision shall be binding on both parties. All arbitrations shall be held in Mumbai. The cost for arbitration shall have to be borne by the bidder.

2.16 Tax and Duties

The Vendor shall be entirely responsible for all taxes, duties, license fees, road permits etc. No increase in the rates shall be allowed during the period of the contract. TDS, if any, shall be deducted from the payment of vendor as per provisions of law.

2.17 Notices

2.17.1 Any notice given by one party to the other pursuant to this contract shall be sent to the other party in writing and confirmed in writing to the party's address.

2.17.2 A notice shall be effective when delivered or on the notices effective date whichever is later. For the purposes of all notices by the Vendor to the Tendering Authority on change address if informed in writing, these shall be sent to the Tendering Authority by the Vendor at the address mentioned in the Letter of Award.

2.18 Governing Language

English language e-version of the contract shall govern its interpretation.

2.19 Applicable Laws

The contract shall be governed in accordance with the law prevailing in India, Act, Rules, Amendments and orders made there on from time to time.

2.20 Indemnification

The contractor shall indemnify the purchaser against all actions, suits, claims and demand or in respect of anything done or omitted to be done by contract or in connection with contract and against any losses or damages to the purchaser in consequence of any action or suit being brought against the contractor for anything done or omitted to be done by the contractor in the execution of the contract.

SECTION 3: SPECIAL CONDITIONS SPECIFIC TO THE CONTRACT

The special conditions of the contract shall overrule any conditions written in the tender document elsewhere.

3.1 Confidentiality

3.1.1 Any information and data pertaining to the Directorate of Vocational Education and Training (DVET) or any other agency involved in the Contract matter concerning Government of Maharashtra or with the agency that comes to the knowledge of the Vendor in connection with this contract shall be deemed to be confidential and the Vendor shall be fully responsible for the same being kept confidential and held in trust, as also for all consequences of its concerned personnel failing to do so. The Vendor shall ensure due secrecy of information and data not intended for public distribution.

3.1.2 The affidavit on the following format to that effect shall be submitted along with Security Deposit on appropriate Non-Judicial Stamp Paper duly attested by Public Notary: ¬

"Certified that any information and data pertaining to the Directorate of Vocational Education and Training (DVET) or any other agency involved in the Contract or matter concerning Government of Maharashtra or with the agency that comes to the knowledge of the Vendor in connection with this contract shall be deemed to be confidential and I/we are fully responsible for the same being kept confidential and held in trust, as also for all consequences of I/ our personnel failing to do so. Also it is certified that I/ we shall maintain due secrecy of information and data shall not be intended for Public distribution."

3.2 Delivery Period and Place of Delivery

The goods shall be delivered within the period as specified in **clause 4.3** (Tender Form and Specification of Tender Item) from the date of receipt of supply order to the consignee as per quantity indicated in the supply order on door delivery basis as mentioned in schedule of requirement. The vendor must submit the delivery schedule consignee wise at the time of acceptance of the contract. The delivery schedule shall also include the conceivable date for the offer of PDI if applicable.

3.3 Installation as required

The successful bidder shall also be responsible for supply, installation and commissioning. All equipment's supplied shall be of standard make. The bidder(s) are instructed to carefully examine this document and let Tendering Authority know at the time of pre-bid meeting if any additional item is required to complete the successful working.

3.4 Inspection and tests

3.4.1 Inspection

On behalf of the Buyer organization, any one of the following Inspection Agency shall conduct inspection of stores before acceptance:

- Pre-dispatch Inspection (PDI) at Seller Premises: PDI Team nominated by buyer.
- Post Receipt Inspection (PRI) at consignee site before acceptance of stores: PRI Team nominated by buyer.

Goods are to be offered for Inspection in the factory premises, all expenditure shall be borne by the vendor. The store ordered shall have to be offered for inspecting team for inspection in open condition and shall be repacked in the presence of inspecting team. Inspection charges, including the expenses for the experts, shall be payable by the vendor.

3.4.2 Part delivery and part pre-dispatch inspection shall be allowed. The vendor may offer goods for inspection in parts/ batches. Each part delivery shall be subject to separate pre-dispatch inspection by the team of officers nominated by DVET or any third-party agency nominated by DVET. The vendor shall provide advance notice of at least 7 days for each part delivery inspection. All expenses related to part inspections shall be borne by the vendor.

3.4.3 The purchaser's right to inspect, test and, where necessary, reject the goods after the goods arrival and after installed at project site shall in no way be limited or waived by reason of the goods having previously been inspected, tested and passed by the purchaser or its representative prior to the goods shipment.

3.4.4 The purchaser shall be the final authority to reject full or any part of the supply, which is not confirming to the specifications and other terms and conditions. No payment shall be made for rejected stores. Rejected items must be removed by the vendor within two weeks of the date of rejection at their own cost and replaced immediately. In case rejected items are not removed it shall be destroyed at the risk, responsibility and cost of the vendor.

3.4.5 The date on which the acceptable goods have been offered for inspection to the inspecting agency shall be deemed as date of delivery provided that the stores have been offered for inspection within the delivery period. If the inspection team reached at factory premises for PDI and found the goods are in not in ready condition, then the PDI offer letter submitted by the successful bidder is not considered as a date of delivery and the penalty clause shall be applicable as per the Liquidity Damage clause no. 3.6.

3.4.6 However, the Buyer may in its sole discretion without assigning any reason may refuse to extend the delivery period or may consider for termination of the Contract without issuing notice to vendor.

3.5 Payment

3.5.1 90% payment against delivery and 10% against acceptance certificate by purchaser's representative or after satisfactory installation, commissioning, testing, training, working trial (if applicable) at consignee's place.

3.5.2 The purchaser shall have every right to deduct the pending dues on account of loss, compensation, or any remedial action in monetary terms from the said payment.

3.5.3 The purchaser also has the right to deduct any pending dues (if any) from the supplier and the decision of the Director in this regard shall be final. The supplier shall not agitate on the said issue in future.

3.5.4 Any tax levied by the Government/Local authorities on bills, shall have to be borne by the Vendor.

3.5.5 Where any claim for the payment of a sum of money arises, out of or under this contract against the contractor, the tendering authority shall be entitled to recover such a sum by appropriating in part or whole, from the performance security to be deposited by the contractor. In the event of the performance security being insufficient, the balance of the total sub recoverable, as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the contractor under this and any other persons contracting through the Directorate of Vocational Education and Training shall this sum not be sufficient to recover the full amount recoverable the contractor shall pay to this office the remaining balance due. For failure to deposit the amount legal action shall be taken against the contractor.

3.5.6 All the payments to the vendors shall be made only through ECS/NEFT and therefore the vendors must have account in the bank where Core Banking facility is available. The bidders are required to give the details of the bank accounts in the bidder details form.

3.6 Penalty

3.6.1 Liquidated Damages: A. If the supplier fails to deliver any or all of the goods within the period(s) specified in the Contract, the Buyer shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to **0.5% of the delivery price** of the delayed goods for each week or part thereof of delay until actual delivery, up to a maximum deduction of **5% of delivery price** of the stores. Date of delivery is the date on which acceptable goods have been offered for inspection to the inspecting agency. However, the Buyer may, in its sole discretion without assigning any reason may refuse to extend the delivery period or may consider for termination of the Contract without issuing notice to vendor.

3.6.2 Goods Dispatch letter will be issued to the selected Bidder after PDI. The supply period will be mentioned in the said Dispatch Letter for dispatching the goods at consignee's location. Late supply of goods at consignee location **after 10 days** will incur an **additional 0.5%** late fee per week. If the goods not supplied in reasonable time, the Buyer may, in its sole discretion without assigning any reason may refuse to extend the delivery time or may consider for termination of the Contract without issuing notice to vendor.

3.7 Sub Contract

The vendor shall not assign or subcontract the assignment or any part thereof to any other Vendor except with the prior consent in writing of the Tendering Authority and provided that Directorate shall have specifically approved such other Vendor. The Directorate may in its sole discretion and without assigning any reason may refuse to give such consent.

3.8 Warranty

3.8.1 Unless otherwise specified in **Annexure A**: Specification provided with this tender document, the warranty shall remain valid for **1 year from the date of installation** at consignee destination.

3.8.2 The supplier shall submit the written warranty in **Annexure 11**, that all goods supplied under the contract are of the most recent or current models and that they incorporate all recent improvements in design and materials provided in the contract.

3.8.3 The purchaser shall have the right to make claims under the above warranty after the goods have been delivered to the final destination indicated in the contract. Upon receipt of a written notice from the Purchaser, the supplier shall, within the period of 15 days replace the defective Goods without cost to the Purchaser. The supplier shall be entitled to remove, at his own risk and cost, the defective goods once the replacement goods have been delivered.

3.8.4 If, after being noticed that the defect has been confirmed pursuant to above clause, the Supplier fails to replace the defective goods within the period of 15 days the Purchaser may proceed to take such remedial action as may be necessary, including removal and disposal, at Supplier's risk and expense and without prejudice to any other rights that the Purchaser may have against the supply under the contract. The Purchaser shall also be entitled to claim for storage, in respect of the defective goods for the period following notification and deduct the sum from payments due to the Supplier under this Contract.

3.8.5 The supplier must ensure 99% uptime during warranty period. In case of additional down time, warranty period shall be extended for period 2 times of down time. The defective equipment must be attended within 48 working hours for all places. If the equipment is not attended within stipulated period, he shall be liable for penalty of 0.05% of contract value for every day of the delay.

3.9 Incidental Services

The supplier shall be required to provide any or all of the following services, including additional services wherever required.

3.9.1 Performance or supervision of the on-site assembly and/or start-up of the supplied Goods

3.9.2 Furnishing of tools required for assembly and/or maintenance of the supplied Goods

3.9.3 Furnishing of detailed operation and maintenance manual for each appropriate unit of supplied Goods

3.9.4 Performance or supervision or maintenance and/or repair of the supplied Goods including mandatory services, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract.

3.10 Spare Parts

The vendor shall be required to provide any or all of the following materials, notifications and information pertaining to spare parts manufactured or distributed by the vendor.

Such spare parts as the Purchaser may elect to purchase from the vendor, providing that this

election shall not relieve the vendor of any warranty obligations under the Contract and in the event of termination of production of the spare parts:

3.10.1 The supplier shall give advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements

3.10.2 Following such termination, the supplier shall furnish at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts if requested.

3.10.3 The vendor shall provide free maintenance services during the period of warranty.

3.11 Handing Over of Work

The Vendor shall be bound to hand over the works executed under the contract complete in all respect to the satisfaction of the Tendering Authority. The Tendering Authority shall determine the date on which the work is considered to have been completed. The Tendering Authority shall determine from time to time, the date on which any particular section of the work shall have been completed, and the Vendor shall be bound to observe any such determination of the Tendering Authority.

3.12 Committee for Supervision

The Tendering Authority shall be at liberty to set up Committee of Officers to supervise all services in all the areas mentioned above. The directions of such committees with regard to all the general services, even if other than those mentioned in this Tender, would be binding on the Vendor for compliance.

3.13 Legal Jurisdiction

All legal disputes are subject to the jurisdiction of Mumbai courts only. All the suits arising out of the contract shall be instituted in the court of competent jurisdiction situated in Mumbai only and not elsewhere.

3.14 Saving Clause

No suits, prosecution or any legal proceedings shall lie against the Director, Directorate of Vocational Education and Training, Mumbai or any person for anything that is done in good faith or intended to be done in pursuance of tender.

SECTION 4: SCOPE OF WORK

4.1 Scope of work

The Scope of work involves following:

4.1.1 Supply, Installation and commissioning of Training Items for Mechanic Electric Vehicle. Trade under Craftsman Training Scheme (CTS) at various Government Industrial Training Institutes (ITI) and/ or Offices under the jurisdiction of Directorate of Vocational Education and Training, Maharashtra State.

4.1.2 The Supplier shall Identify and mobilize training Instructor as per qualification and experience mentioned by Directorate General of Training, New Delhi (DGT) for the respective Trade at consignee location if DVET demands. The Cost of such instructors shall be borne by DVET. The bidder must submit an undertaking as per format prescribed in **Annexure 17** during bid submission.

4.1.3 Provide hands on training to minimum 2 instructors per set up on the Equipment provided and hand hold the instructors during warranty period. The training shall be minimum 2 weeks (minimum 5 days per week). The training expenses shall be borne by supplier. DVET Shall bear expenses incurred for travelling, Stay and daily allowances for deputed instructors.

4.2 Specification of Requirements

As per **Annexure A**: Technical Specification of Items

4.3 Tender Form and Specification of the Tender Item

Tender No.	:	TE-25001R2/2025-26
Tender shall remain valid till	:	180 Days from the Date on Opening of Tender
Delivery Period	:	8 weeks

4.4 Consignees:

Detailed Name and Location of Consignees with Quantity are given in **Annexure B**: Consignee wise Quantity of Items.

SECTION 5: ADDITIONAL TERMS AND CONDITIONS

5.1 Additional Terms and Conditions:

5.1.1 The product offered must meet the specifications as specified in the Bid Documents. Bidder can apply for the Bid, if the product offered has better and higher specifications than the specified specification in the Bid, but the right to accept or reject the said better and higher specifications will remain entirely with the Buyer. All other parameters must generally conform to the stated standards (IS or equivalent international standards). Images / Diagram and Reference Brands are only indicative of the product required. Any item not forming part of the specification but is required for installation of the item, the same shall be supplied free of cost by the manufacturer.

5.1.2 Data Sheet of the product(s) offered in the bid are to be uploaded along with the bid documents. Buyers can match and verify the Data Sheet with the product specifications offered. In case of any unexplained mismatch of technical parameters, the bid is liable for rejection.

5.1.3 QR Code:

QR Code must be generated by the supplier. The PDI team will affix the QR code to the equipment/machines after successful PDI. The QR code must contain the following information's:

- 5.1.3.1 Item Name
- 5.1.3.2 Description of item
- 5.1.3.3 Make and Model No
- 5.1.3.4 Serial No.
- 5.1.3.5 Name of supplier
- 5.1.3.6 Purchase Order No. and Date
- 5.1.3.7 Unit Cost
- 5.1.3.8 PDI team members with mobile nos.
- 5.1.3.9 Date of PDI
- 5.1.3.10 Name of Institute/office
- 5.1.3.11 Warranty Period
- 5.1.3.12 Service Support No.

5.1.4 The Buyer reserves the right to issue Repeat Orders per Clause 3.3.2 of Maharashtra Government Resolution dated 1.12.2016.

5.1.5 Terms and conditions mentioned in Maharashtra Government Resolution for Purchase by Industry, Power and Labour department dated 01.12.2016, 24.08.2017, 08.12.2017, 07.03.2024 and any purchase related GR published from time to time by Government of Maharashtra shall be applicable.

- 5.1.5.1 GR dated 01.12.2016: https://gr.maharashtra.gov.in/Site/Upload/Government%20Resolutions/Marathi/201612021708269510.pdf
- 5.1.5.2 GR date 24.08.2017: https://gr.maharashtra.gov.in/Site/Upload/Government%20Resolutions/Marathi/201708241235162110.pdf
- 5.1.5.3 GR date 08.12.2017: https://gr.maharashtra.gov.in/Site/Upload/Government%20Resolutions/Marathi/201712081710303810.pdf
- 5.1.5.4 GR date 07.03.2024: https://gr.maharashtra.gov.in/Site/Upload/Government%20Resolutions/Marathi/202403131154305010.pdf

5.1.6 MII Purchase Preference:

- 5.1.6.1 The minimum local content to qualify for bid shall have a class II local supplier i.e. less than 50% to 20% local content Items.

5.1.6.2 50% of Order quantity shall be awarded to L1 and remaining to class I local supplier i.e. equal or more than 50 % local content Items subjected to supplier quoted price failing within the Margin of purchase preference L1+20% and matching price to L1.

5.1.7 MSE Purchase Preference:

75% of Order quantity shall be awarded to L1 and remaining to MSE OEM subjected to supplier quoted price failing within the Margin of purchase preference L1+15% and matching price to L1. Margin of purchase preference - L1+15%

5.1.8 Start Up Preference:

90% of Order quantity shall be awarded to L1 and remaining to Start Up OEM subjected to supplier quoted price failing within the Margin of purchase preference and matching price to L1. Margin of purchase preference - L1+15%

5.1.9 The procuring entity will reject a proposal for award if it determines that the Bidder/Service Provider (Consulting and Non-consulting) recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive or obstructive practices in competing for the contract in question. The procuring entity will cancel the portion of the funds allocated to a contract if it determines at any time that representatives of the bidders, suppliers, contractors or consultants engaged in corrupt, fraudulent collusive, coercive or obstructive practices during the procurement or execution of that contract, without the procuring entity having taken timely and appropriate action satisfactory to the buyer. The procuring entity will sanction a firm or individual, including declaring them ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has, directly or through an agent, engaged, in corrupt, fraudulent, collusive, coercive, or obstructive practices. Bidders, suppliers, contractors and consultants to permit the procuring entity to inspect their accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by the procuring entity.

5.1.10 As far as possible, disputes may be resolved with mutual agreement between the procuring entity and bidders, suppliers, contractors and consultants through alternate dispute resolution mechanisms to avoid going through arbitration and litigation stages. All the contracts will be governed by the laws of India. The courts of the place, from where the acceptance of tender has been issued, shall alone have jurisdiction to decide any dispute arising out of or in respect of the contract. Irrespective of the place of delivery, the place of performance or place of payment under the contract or the place of issue of advance intimation of acceptance of tender, the contract will be deemed to have been made at the place from where the acceptance of the tender has been issued. In the event of any question, dispute or difference arising under the contract conditions or any special conditions of contract, or in connection with the contract (except as to any matters the decision of which is specially provided for by these or the special conditions) the same will be referred to the sole arbitration of an officer, from the government department other than the department which decided the contract, having sufficient knowledge of law, appointed to be the arbitrator by the Buyer. The decision of the arbitrator shall be final and binding on both the parties to this contract. In the event of the arbitrator dying, neglecting or refusing to act or resigning or being unable to act for any reason, it will be lawful for the Buyer to appoint another arbitrator in place of the outgoing arbitrator in the manner aforesaid, it is further a term of the contract that no person other than the person appointed by the Buyer as aforesaid should act as arbitrator and if for any reason that is not possible, the matter is not to be referred to arbitration at all. Arbitrator may, from time to time, with the consent of all parties to the contract enlarge the time for making the award. In pursuance of a reference, the assessment of the costs incidental to the reference and award respectively will be at the discretion of the arbitrator. Subject to as aforesaid, the Arbitration

and Conciliation [Amendment] Act, 2015 amended up to date and the rules there under and any statutory modification thereof for the time being in force will be deemed to apply to the Arbitration proceedings under this clause. The arbitrator will be requested to give a reasoned award.

5.1.11 The venue of arbitration will be the place from which formal Acceptance of Tender is issued or such other place as the Buyer at his discretion may determine.

5.1.12 After delivery, Installation and testing, the vendor will have to register the product with the respective OEM and confirm genuineness of the product and warranty.

5.1.13 Manufacturer/ OEM must provide certificate on Manufacturer/ OEM's letterhead regarding the genuineness, quality and compliance of the goods as per specifications laid down in the purchase order.

5.1.14 Submission of Bills: Bills for the stores to be supplied in compliance of this contract must be prepared in Triplicate and sent to the respective Consignee for payment. No interest shall be paid to the successful bidder if any delay in payment due to any reason.

5.1.15 The decision of the Purchasing Officer shall be final as regards the acceptability of stores supplied by the Contractor and Purchasing Officer shall not be required to give any reason in writing or otherwise at any time for rejection of the stores in the said tender.

5.1.16 Intimation of Status: This office must be kept informed of the progress of the delivery of materials, etc. and intimation should be sent upon final completion of the contract.

5.1.17 All terms and conditions mentioned in the tender document will be applicable.

5.1.18 Bidder will be disqualified during the technical scrutiny without giving any reason; if it is found that the price of Machinery/Equipment is mentioned along with any document before the opening of the commercial rate, in the said tender.

5.1.19 The tender issuing authority reserves the right to cancel the tender at any stage without mentioning any reason.

5.1.20 The materials, equipment mentioned in the tender should not be given as old (Refurnished) under any circumstances. A completely new supply of machinery should be provided. If the machinery and equipment is found to be old, the supply order will be canceled without any valid reason and security deposit will be deposited. In such cases, the bidder may be black listed for participating in any further bid of DVET.

5.1.21 Supply order will be issued to the tenderer after completion of all tender process. It will be mandatory for the tenderer to submit all the original documents submitted in the tender form for qualification to the Directorate. The Director, DVET, Mumbai shall have full authority to cancel the said supply order if objectionable material is found in the said original document.

5.2 Use of Contract Documents and Information

5.2.1 The Vendor shall treat as confidential all data and information about the Tendering authority, obtained in the execution of his responsibilities, in strict confidence and shall not reveal such information to any other party without the prior written approval of the Tendering Authority.

5.2.2 The Vendor shall not, without the Tendering Authority's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Tendering Authority in connection therewith, to any person other than a person employed by them in performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only as far as may be necessary for purposes of such performance.

5.2.3 Any document, other than the contract itself, shall remain the property of the Tendering Authority and shall be returned (in all copies) to the Tendering Authority on completion of the Vendor's performance under the Contract if so required by the Tendering Authority.

5.2.4 The Vendor must act in good faith and at all times extend its fullest cooperation to the Tendering Authority, its employees and agents during the performance of the Services.

5.2.5 The Vendor shall act with appropriate propriety and discretion and in particular shall refrain

from making any public statement concerning the Project or the Services without prior approval of Tendering Authority.

5.2.6 The Vendor shall refrain from disclosing or publicizing to its clientele including past and prospective clients or to the public that it has provided Services to the Directorate without prior approval of the Tendering Authority.

5.2.7 The Vendor shall not divulge to any person not authorized by the Directorate and shall not use for its own purposes, any information concerning the Tendering Authority, its staff or the Project which the Vendor may have access to directly or indirectly from the services performed under this Agreement or otherwise during the course of the Project; strict confidentiality shall be maintained by the Vendor and its employees/agents in respect of the information provided by the Directorate to the Vendor.

5.2.8 The Vendor shall have no authority to commit the Tendering Authority to any additional costs, fees or expenses in connection with the Project.

5.2.9 The vendor shall report immediately to the Tendering Authority any circumstances or events which might reasonably be expected to impair or prejudice the performance of the Services.

5.2.10 All data, reports, notes, drawings, specifications, statistics, plans and other documents and data compiled or made by the Vendor while performing the Services shall be the exclusive property of the Tendering Authority and the Vendor shall have no copyright or other interest therein, and upon sooner determination of the contract or Termination of the Engagement, the said documents and records shall be submitted to the Tendering Authority or disposed of as Tendering Authority may direct.

5.2.11 The Vendor shall at all-time refrain from showing the report/work in progress or the completed report/work to any person not authorized by the Tendering Authority

5.2.12 The Vendor shall make available to the Tendering Authority documents and records related to the performance of the Vendor for verifying the authenticity of the claims made.

SECTION 6: FORMATS FOR ANNEXURES

Annexure 1: Proforma of Covering Letter

(To be printed on Official Letter Head of Bidder)

To,
The Director
Directorate of Vocational Education and Training, Maharashtra State,
3, Mahapalika Marg, Mumbai 400001

Subject: Submission of Bid

Reference: Tender No. Tender No.
Supply and Installation of Name of Group/ Item at Consignee Location

Dear Sir,

1. Having examined the tender document, the receipt of which is hereby acknowledged, we, the undersigned, offer to supply and deliver the goods under the above named Contract in full conformity with the said tender document and our financial offer in the Price schedule submitted in Envelope No. 2 which is made part of this tender.
2. We undertake, if our tender is accepted, to deliver the goods in accordance with the delivery schedule specified in the tender document.
3. If our tender is accepted, we undertake to submit the security deposit in the form, in the amounts, and within the times specified in the tender document.
4. We agree to abide by this tender, for the Tender Validity Period specified in the tender document and it shall remain binding upon us and may be accepted by you at any time before the expiration of that period.
5. Until the formal final Contract is prepared and executed between us, all the terms and conditions of the tender document(s) shall constitute a binding contract between us without considering a deviation as might be indicated in our tender. We further understand that you are not bound to accept the lowest or any tender you may receive.
6. We undertake to accept the penalty clause, risk purchase clause and fall clause.
7. We hereby confirm that all pages of the Technical Bid have been sequentially numbered and the corresponding page numbers have been referenced in the Checklist as per the requirements of the Tender Document.

Date: DD/MM/YYYY

Signature of Authorized Representative of Bidder
Name of Authorized Representative of Bidder
Designation of Authorized Representative of Bidder
Duly authorized to sign this bid for and on behalf of
Bidder Name with Address

Seal of Bidder

Annexure 2: Proforma of Manufacturers' Authorization Certificate

(To be printed on Official Letter Head of Original Equipment Manufacturer (OEM))

To,
The Director
Directorate of Vocational Education and Training, Maharashtra State,
3, Mahapalika Marg, Mumbai 400001

Subject: Manufacturers' Authorization Certificate

Reference: Tender No. Tender No.
Supply and Installation of Name of Group/ Item at Consignee Location

Dear Sir,

We who are established and reputable manufacturers of Name, Make and/ or Model and description of goods offered having factories at Address of Factory do hereby authorize M/s Name and address of Bidder to submit a bid and sign the contract with you for the goods manufactured by us against the above.

1. We have read the technical specification of this tender and confirm all the specifications contained therein.
2. We also undertake that the stores tendered shall not be obsolete for next five years.
3. We hereby extend our full guarantee and warranty as per Clause 3.8 of the tender document and for the goods and services offered for supply by the above firm against this tender enquiry.

Date: DD/MM/YYYY

Signature of Authorized Representative of OEM
Name of Authorized Representative of OEM
Designation of Authorized Representative of OEM
Duly authorized to sign this bid for and on behalf of
OEM Name with Address

Seal of OEM

Note: *This letter of authority shall be on the **printed original letterhead** of the manufacturer and shall be signed by a designated person competent and having the power of attorney to bind the manufacturer and is mandatory to be included by the bidder in its bid.*

Date: DD/MM/20YY

Signature of Authorized Representative of Bidder
Name of Authorized Representative of Bidder
Designation of Authorized Representative of Bidder
Duly authorized to sign this bid for and on behalf of
Bidder Name with Address

Seal of Bidder

Annexure 3: Proforma for Annual Turnover Certificate for last three preceding financial years

(To be printed on Official Letter Head of Chartered Accountant/ Chartered Accountant Firm)

The Annual Turnover of M/s Name and Address of OEM/ Bidder for the past three preceding financial years are given below and certified that the statement is true and correct.

S.N.	Year	Turnover in Indian Rs.
1	2022-2023	
2	2023-2024	
3	2024-2025	
4	Average	

Date: DD/MM/20YY

Signature of Chartered Accountant
Name of Chartered Accountant
Name of Chartered Accountant Firm - if applicable

Seal of Chartered Accountant

Date: DD/MM/20YY

Signature of Authorized Representative of Bidder
Name of Authorized Representative of Bidder
Designation of Authorized Representative of Bidder
Duly authorized to sign this bid for and on behalf of
Bidder Name

Seal of Bidder

Note:- All audit reports, certificates, and any financial documents certified or issued by a Chartered Accountant (CA) must invariably include a valid Unique Document Identification Number (UDIN). Documents that do not bear a UDIN will not be considered valid or acceptable for official purposes.

Annexure 4: Details of Bidder

(To be printed on Official Letter Head of Bidder)

Subject: Details of Bidder
Reference: Tender No. Tender No.
Supply and Installation of Name of Group/ Item at Consignee Location

1. General Profile of the Company/ Firm:

1.1	Name of Bidder Company/ Firm	
1.2	Address of the Company/ Firm	
1.3	Telephone Nos.	
1.4	Fax	
1.5	E-mail	
1.6	Website	
1.7	Date of Incorporation of Company/ Firm	
1.8	Offices situated at different locations in Maharashtra and or India	
1.9	Name of Equipment, Machinery, Manufactured and Supplied during last three years	
1.10	GST Registration No.	
1.11	PAN No.	
1.12	Premises/ Space available in square feet	

2. Manufacturing and Supplying experience:

2.1. Number of years' experience in the field:

2.2. Details of clients where the quoted item is currently operational with details of installation and years of live operation of the projects completed.

Name	Address	Telephone/ Mobile No.	E-Mail of Contact Person

Note: *For retail items like Hand Tools, Power Tools, Cutting Tools, Electrical/ Electronic Measuring and Testing Equipment's, other consumable and semi consumable items write Not Applicable.*

3. Product Information

3.1. Whether the Company holds intellectual property rights over the Manufacturing and Process: Yes / No / Not Applicable

3.2. Whether the company is OEM: Yes / No

4. List of Clients (For a period of last three preceding years):

S.N.	Name and Address of the client with Tel. No.	Contact Person and Contact Number	Nature of Job	Total Value of the Contract (In Rupees)

Note: *Separate pages may be taken to elaborate the projects undertaken. Write NA i.e. Not Applicable in case of retail items like Hand Tools, Power Tools, Cutting Tools, Electrical/ Electronic Measuring and Testing Equipment's, other consumable and semi consumable*

items.

5. **Experience with State Govt. Organization: Yes / No.**
   If yes please mentioned the Name of the Organizations along with period.

6. **Whether service shall be provided on holidays and beyond Office Hours also in case of utmost urgency: Yes / No.**

7. **Quality Certificate, if any:**

S.N.	Name of the Certificate	Certified by	Year of Getting Certification	Whether Certificate is valid as on date

8. **Awards for products/Services, if any:**

S.N.	Name of the Award	Awarded by	Year of getting Awarded	Field of Award

9. **Bank Details:**

9.1	Account Holder Name	
9.2	Name of the Bank	
9.3	Address of the Branch	
9.4	IFSC Code No.	
9.5	MICR Code	
9.6	Account No.	
9.7	Type of Account	

10. **Any other information which the Bidder feels necessary to bring the notice of DVET.**

11. **Single Point of Contact to whom all References shall be made regarding this tender:**

12. **Name, address and Telephone Number [Office, Fax, Mobile] of the Contact Person**

12.1	Name of Contact Person	
12.2	Designation	
12.3	Office Landline Phone No.	
12.4	Office Fax No.	
12.5	Mobile No.	
12.6	E-Mail	

Note:

1. *In-adequate information could lead to disqualification of the bid.*
2. *All items shall be supported by proper documents.*

Date: DD/MM/20YY

Signature of Authorized Representative of Bidder
Name of Authorized Representative of Bidder
Designation of Authorized Representative of Bidder
Duly authorized to sign this bid for and on behalf of
Bidder Name with Address

Seal of Bidder

Annexure 5: Proforma of Manufacturing Facilities

Subject: Proforma of Manufacturing Facilities
Reference: Tender No. Tender No.
Supply and Installation of Name of Group/ Item at Consignee Location

All details shall relate to the manufacturer for the items offered for supply. Clause or points must be answered to the point. In case of incomplete information. The purchaser may ask for additional information and the bidder should submit the same within stipulated period.

1. Name and Address of the Manufacturer:
2. Name and Designation of Contact Person of Manufacturer:
3. Contact Details
   3.1. Telephone No.: Office/ Factory/Works
   3.2. Fax No.: Office/ Factory/ Works
   3.3. E-mail ID:
4. Location of the Manufacturing Factory:
5. Details of Industrial/ Factory Registration License as per statutory regulations:
6. Details of important Plant and Machinery functioning in each department of factory:
   (Mention ownership of items i.e. Purchased or Leased basis separately as available now)
7. Details of the process of manufacturing followed in the factory (If available)
8. Details and Stocks of raw materials held (If available):
9. Production capacity of item(s) quoted for, Total value of products manufactured with the existing Plant and Machinery during last three preceding financial years: 2021-22, 2022-23 and 2023-24
   9.1. Normal
   9.2. Maximum
10. Details of arrangement for quality control of products such as laboratory, testing equipment etc.:
11. Details of Staff: (As per register of employees)
    11.1. Details of technical supervisory staff in charge of production and quality control
    11.2. Skilled labor employed
    11.3. Unskilled labor employed
    11.4. Maximum No. of workers (skilled and Unskilled) employed on any day during the 18months preceding the date of Tender
12. Whether Goods are tested/manufactured to any standard specifications?
    If so, copies of original test certificated or notarized shall be submitted.
13. Manufacturers shall submit details of their registration in respective countries.

Date: DD/MM/YYYY
Signature of Authorized Representative of OEM — Seal of OEM
Name of Authorized Representative of OEM
Designation of Authorized Representative of OEM
Duly authorized to sign this bid for and on behalf of
OEM Name with Address

Date: DD/MM/20YY
Signature of Authorized Representative of Bidder — Seal of Bidder
Name of Authorized Representative of Bidder
Designation of Authorized Representative of Bidder
Duly authorized to sign this bid for and on behalf of
Bidder Name with Address

Annexure 6: Past Performance from Bidder and or OEM

(For a period of last 3 years i.e. 2022-23, 2023-24 and 2024-25)
(To be printed on Official Letter Head of Bidder and or OEM)

Annexure 6A: Performa of Past Performance other than DVET

S.N.	Name of the Product	Name and full address of the Purchaser	Purchase Order No. and Date	Quantity	Date of completion as per order	Date of actual delivery in respect of order	Remarks indicating reasons for the delay in delivery if any

Annexure 6B: Past Performance with DVET

S.N.	Name of the Product	Name and full address of the Purchaser	Purchase Order No. and Date	Quantity	Date of completion as per order	Date of actual delivery in respect of order	Remarks indicating reasons for the delay in delivery if any

Note:

1. *This proforma must be supported with work orders and the declaration of the bidder and/or OEM that they have successfully completed the execution of purchase order in all respect during last three preceding financial years. DVET shall evaluate the reasons of undue delay (if any) and reserves the right to reject the bid in case of undue delays without proper reasoning.*
2. *In case of any non-disclosure, wrong disclosure, or failure to provide supporting work orders and declarations of successful completion, DVET reserves the right to reject the bid. Furthermore, DVET may take appropriate action in instances of non-disclosure, wrong disclosure or any misrepresentation of information during any tender evaluation stage or post tender finalization stage.*

Date: DD/MM/20YY
Signature of Authorized Representative of Bidder
Name of Authorized Representative of Bidder
Designation of Authorized Representative of Bidder
Duly authorized to sign this bid for and on behalf of
Bidder Name with Address

Seal of Bidder

Annexure 7: Price Schedule

Financial Proposal should be submitted through online bid submission process only through e-tendering portal https://mahatenders.gov.in/

Tendered: The Director
Directorate of Vocational Education and Training, Maharashtra State,
3, Mahapalika Marg, Mumbai 400001

Subject: Proforma of Manufacturing Facilities

Reference: Tender No. Tender No.
Supply and Installation of Name of Group/ Item at Consignee Location

S.N.	Item Description	Quantity	Item Rate inclusive of all Taxes (Rs. in Figures	Amount with Taxes	
				Rs. in Figure	Rs. in Words
1	2	3	4	5	6
	Quoted Total Bid Amount Rs. in Figures				
	Quoted Total Bid Amount Rs. in Words				

Note.

1. *In case of discrepancy between cost quoted in figures and words, the cost quoted in words shall be consider.*
2. *This financial Bid is to be uploaded with BOQ only. If financial bid submitted with the technical bid, then bid may be non-responsive.*
3. *Extra items, if any required for successful installation, trial and working of the goods should be supplied and installed at no extra charges other than the above quoted Total Bid Price.*
4. *Offer shall be inclusive of all taxes, F.O.R. Destination (Price for Packing and forwarding (Including loading and unloading), Inland Transportation, Insurance, Installation, Trial, Commissioning and other Incidental Services required to convey the Goods to their final destination.*

Date: DD/MM/20YY

Signature of Authorized Representative of Bidder
Name of Authorized Representative of Bidder
Designation of Authorized Representative of Bidder
Duly authorized to sign this bid for and on behalf of
Bidder Name with Address

Seal of Bidder

Annexure 8: Technical Specifications Compliance and No Deviation Statement

(To be printed on Official Letter Head of Bidder)

Technical Specifications Compliance and No Deviation statement of specification of the equipment offered giving details of specifications:

Subject: Technical Specifications Compliance and No Deviation

Reference: Tender No. Tender No.
Supply and Installation of Name of Group/ Item at Consignee Location

S.N.	Specification of item stated in Tender Enquiry	Specification of item offered by Bidder (Mention Make and/ or Model Number)	Whether there are deviation from the tender specification (Yes/ No)	If yes, indicate clearly which the deviations are

This is to certify that there is no deviation between tender specifications and specifications offered by us.

Date: DD/MM/20YY

Signature of Authorized Representative of Bidder
Name of Authorized Representative of Bidder
Designation of Authorized Representative of Bidder
Duly authorized to sign this bid for and on behalf of
Bidder Name with Address

Seal of Bidder

Note: *At the time of evaluation of bid, if it is found that the bidder has not given the compliance step-by-step (Compliance should be given for each line item for each specification) as per technical specification of tender then such bid shall lead to disqualification and shall not be considered for further processing.*

Annexure 9: Bank Guarantee for Security Deposit

To,
Director
Directorate of Vocational Education and Training, Maharashtra State,
3, Mahapalika Marg, Mumbai 400001

WHEREAS Name and Address of Supplier hereinafter called "the Supplier" has undertaken, in pursuance of Contract No. Contract No. Dated DD/MM/YYYY, to Name of Store hereinafter called "the Contract".

AND WHEREAS it has been stipulated by you in the said Contract that the Supplier shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Supplier a Guarantee:

THEREFORE We hereby affirm that we are Guarantors and responsible to you, on behalf of the supplier, up to a total of Amount of the guarantee in Words and Figures and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the Contract and without cavil or argument, any sum or sums within the limit of <Amount of Guarantee> as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the Date day of Month, Year

Date: DD/MM/20YY
<Signature and Seal of Guarantors>
<Name and Address of Guarantors>

<Signature and Seal of Supplier>
<Name and address of Supplier>

Date: DD/MM/20YY

Signature of Authorized Representative of Guarantor
Name of Authorized Representative of Guarantor
Designation of Authorized Representative of Guarantor
Duly authorized to sign this bid for and on behalf of
Guarantor Name with Address

Seal of Guarantor

Annexure 10: Contract Agreement

An Agreement made this Date day of Month, Year Between Name and Address of Supplier (hereinafter called "**The Contractor**") of the one part and the Director, Directorate of Vocational Education and Training, Government of Maharashtra (hereinafter called "**DVET**") of the other part.

Whereas the contractor has tendered to the Government for supply, installation and commissioning of Name of Store to the DVET [hereinafter called of the articles specified in the schedule "A" (attached) as per delivery instructions given in the acceptance of tender at the respective prices or rates mentioned opposite to the said articles in the column provided for the purpose and whereas such tender has been accepted and the contractor has deposited with the tendering authority a sum of Rs. _____(Rupees _____Only) as security for due fulfilment of this agreement in the form of Bank Guarantee.

NOW IT IS HEREBY AGREED between the parties hereto as follows:

1. The contractor has accepted the contract on the terms and conditions set out in the Tender Notice No. Tender No. Dated DD/MM/YYYY as well in the acceptance of Tender No. Tender No. Dated Date, which shall hold good during period of this agreement.
2. Upon breach by the contractor of any of the conditions of the agreement, the tendering authority may by a notice in writing rescind, determine and put an end to this agreement without prejudice to the right of the Government to claim damages for antecedent breaches thereof on the part of the contractor and also to reasonable compensation for the loss occasioned by the failure of the contractor to fulfill the agreement as certified in writing by the tendering authority which certificate shall be conclusive evidence of the amount of such compensation payable by the contractor to the Government.
3. Upon the determination of this agreement whether by effluxion of time or otherwise the said deposit shall after the expiration of _____ months from the date of such determination be returned to the contractor but without interest and after deducting therefrom any sum due by the contractor to the Government under the terms and conditions of this agreement.
4. This agreement shall remain in force until the expiry of 12 Months from the date of entering into the contract but tendering authority may cancel the contract at any time upon giving one month's notice in writing without compensating the contractor.
5. The tendering authority may give notice in connection with the contract.
6. In consideration of the payments to be made by the tendering authority to the supplier as hereinafter mentioned the supplier hereby covenants with the tendering authority to provide the services, maintenance of (Name of store) and to remedy defects therein conformity in all respects with the provisions of the Contract.
7. The tendering authority hereby covenants to pay the supplier in consideration of the provision of the services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the contract.
8. If subject to circumstances beyond control (Force Majeure) the contractor fails to deliver the stores in accordance with the conditions mentioned in the Acceptance of Tender, the tendering authority shall, at his option be entitled either:
    - 8.1. To recover from the contractor as agreed liquidated damages or by way of penalty a sum not **exceeding 0.5 per cent** of the price of the stores which the contractor has failed to deliver as aforesaid for each week or part of a week during which the delivery of such stores may be in arrears, or
    - 8.2. To purchase elsewhere, after giving due notice to the contractor on the account and at the risk of the contractor the stores not delivered or others of a similar description (where

other exactly complying with the particulars are not, in the opinion of the tendering authority which shall be final, readily procurable) without cancelling contract in respect of consignment not yet due for delivery, or to cancel the contract.

8.3. To cancel contract

9. In the event of action being taken under 8.1, 8.2 and 8.3, the contractor shall be liable for any loss which the Tendering Authority, may sustain on that account.

The recovery on account of agreed liquidated damages or by way of penalty under 8.1 above shall be made by deducting the amount in the bills and the recovery of any loss, which the Tendering Authority may sustain under 8.2 and 8.3 shall be made good by a credit note within the stipulated period for the purpose.

Place: Mumbai
Date: DD/MM/YYYY

Signature of Authorized Representative of Supplier Seal of Supplier
Name of Authorized Representative of Supplier
Designation of Authorized Representative of Supplier
Duly authorized to sign this bid for and on behalf of
Supplier Name with Address

On behalf of the Governor of Maharashtra
Represented by
The Director,
Directorate of Vocational Education and Training, Maharashtra State,
3, Mahapalika Marg, Mumbai 400001

Witness:
1.
2.

Annexure 11: Undertaking for Warranty

The Undertaking for Warranty on the following format shall be submitted along with Security Deposit which shall be on appropriate Non-Judicial Stamp Paper duly attested by Public Notary:

M/s Name of Supplier having its registered office at Address of Supplier herein after referred to as the Vendor having carefully studied all the documents, specifications, drawings, etc. pertaining to the Contract for works required for the completion of work of Providing desired services as per the Scope of the Work for the Offices of the Directorate of Vocational Education and Training (DVET) and the local and site conditions and having undertaken to execute the said works.

DO HEREBY WARRANT THAT:

1. The Vendor is familiar with all the requirements of the Contract.
2. The Vendor has investigated the site and satisfied himself regarding the character of the work and local conditions that may affect the work or its performance.
3. The Vendor is satisfied that the work can be performed and completed as required in the contract.
4. The Vendor has seen all risks directly or indirectly connected with the performance of the Contract.
5. The Vendor has had no collusion with other Contractors, or with any other person to execute the said works according to the terms and conditions of the said Contract.
6. The Vendor has not been influenced by any statement or promise of the Directorate of Vocational Education and Training or Officers of the Directorate of Vocational Education and Training but only by the Contract documents.
7. The Vendor is financially solvent.
8. The Vendor is experienced and competent to perform the Contract to the satisfaction of the Tendering Authority.
9. The statement submitted by the Vendor is true.
10. The Vendor is familiar with all general and special Laws, Acts, Ordinances, Rules and Regulations of the Municipalities, District, State and Central Government that may affect the work, its performance or personnel employed therein.

Place: Place
Date: DD/MM/YYYY

Signature of Authorized Representative of Supplier
Name of Authorized Representative of Supplier
Designation of Authorized Representative of Supplier
Duly authorized to sign this bid for and on behalf of
Supplier Name with Address

Seal of Supplier

Annexure 12: Format of Declaration

(To be printed on Rs. 500 Non-Judicial Stamp Paper: Notarized Affidavit)

To,
Director
Directorate of Vocational Education and Training, Maharashtra State,
3, Mahapalika Marg, Mumbai 400001

1. In response to the Tender: Supply, Installation and commissioning of Name of Store, Tender No.: Tender No., Dated DD/MM/YYYY as Owner/ Partner/ Director of Name and Address of Bidder, I/ We hereby declare that our Agency Name of Bidder is having unblemished past record and was not declared ineligible for corrupt and fraudulent practices either indefinitely or for a particular period of time.
2. We hereby confirm that we have not been found guilty of malpractice, misconduct, or blacklisted/ debarred either by Government of Maharashtra or by other State Government/ Central Government's organizations in the past and also there are no such proceedings against us.
3. We also undertake that we have not failed to meet its commitment against valid purchase orders issued by this Directorate in any of the last three years (If there was a delay then such delay shall have been duly condoned by this Directorate / Govt. of Maharashtra accepting there as on furnished by the bidder for such delay).
4. We further undertake that our partner M/s Name and Address of Partner of Bidder are also not blacklisted in any Department of Government of Maharashtra
5. I/ We hereby declare that there are no pending cases against M/s Name and Address of Bidder with Government of Maharashtra or any other court of law
6. I/ We hereby declare that Bidder's company or Director/Owner of the company have not been declared insolvent by any Court or by Competent Authorities or is involved in any fraudulent mean (Economical and Criminal) as on date.

Date: DD/MM/20YY

Signature of Authorized Representative of Bidder
Name of Authorized Representative of Bidder
Designation of Authorized Representative of Bidder
Duly authorized to sign this bid for and on behalf of
Bidder Name with Address

Seal of Bidder

Annexure 13: Format for Power of Attorney

(To be printed on Rs. 500 Non-Judicial Stamp Paper: Notarized Affidavit)

Know all men by these presents, We Name and Address of the Registered Office do hereby constitute, appoint and authorize Mr./Ms. Name and Residential Address as our true and lawful attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to submission of our Tender, including signing and submission of the Bid and all documents specified in the Bid Document, including, undertakings, letters, certificates, acceptances, clarifications, guarantees, etc. making representations to the DVET and providing information/ responses to the DVET, representing us in all matters before the DVET and generally dealing with the DVET in all matters in connection with our Bid for the quoted items.

WE HEREBY AGREE TO RATIFY ALL ACTS, DEEDS AND THINGS LAWFULLY DONE BY OUR SAID ATTORNEY PURSUANT TO THIS POWER OF ATTORNEY AND THAT ALL ACTS, DEEDS AND THINGS DONE BY OUR AFORESAID ATTORNEY SHALL AND SHALL ALWAYS BE DEEMED TO HAVE BEEN DONE BY US.

ALL THE TERMS USED HEREIN BUT NOT DEFINED SHALL HAVE THE MEANING ASCRIBED TO SUCH TERMS UNDER THE TENDER DOCUMENT.

Signed By the within Named
Name of the Executant(s)

Through The Hand Of
Name and Sign of the Authorized Signatory

Dated this Date Day of Month, Year

BEFORE ME,

NOTARY

ACCEPTED

_____**(SIGNATURE)**

(NAME, TITLE AND ADDRESS OF THE ATTORNEY)

Note: *The mode of execution of the Power of Attorney shall be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executants and when it is so required, the same shall be under common seal affixed in accordance with the required procedure.*

Annexure 14: Undertaking as per Office Memorandum No.: F. No.6/18/2019-PPD, dated 23.07.2020 and Office Memorandum No.: F.18/37/2020-PPD dated 08.02.2021 published by Ministry of Finance, Department of Expenditure, Public Procurement Division

(To be printed on Official Letter Head of Bidder)

To,
Director
Directorate of Vocational Education and Training, Maharashtra State,
3, Mahapalika Marg, Mumbai 400001

Subject: Undertaking as per Office Memorandum No.: F. No.6/18/2019-PPD, dated 23.07.2020 and Office Memorandum No.: F.18/37/2020-PPD dated 08.02.2021 published by Ministry of Finance, Department of Expenditure, Public Procurement Division

Reference: Tender No. Tender No.
Supply and Installation of Name of Group/ Item at Consignee Location

Dear Sir,

I, Mr./ Ms. Name undersigned, authorized representative of M/s Name of Bidder Company/ Firm has read and understood below mentioned Office Memorandum published by Ministry of Finance, Department of Expenditure, Public Procurement Division for OEM:

1. Office Memorandum No.: F.No.6/18/2019-PPD, dated 23.07.2020

2. Office Memorandum No.: F.18/37/2020-PPD, dated 08.02.2021

I hereby certify that we fulfil all requirements in this regard and is eligible to be considered for procurement under above mentioned Tender

Date: DD/MM/20YY

Signature of Authorized Representative of Bidder
Name of Authorized Representative of Bidder
Designation of Authorized Representative of Bidder
Duly authorized to sign this bid for and on behalf of
Bidder Name with Address

Seal of Bidder

Note: Above mentioned Office Memorandum are available on below mentioned Links:
1. Office Memorandum No.: F.No.6/18/2019-PPD, dated 23.07.2020:
   https://dpe.gov.in/sites/default/files/DPE_OM_DTD_30.7.20.pdf
2. Office Memorandum No.: F.18/37/2020-PPD, dated 08.02.2021:
   https://doe.gov.in/files/circulars_document/Restrictions_Rule_144xi_GFR_2017.pdf

Annexure 15: Declaration of Local Content as per Preference to MII Order 2017

(To be printed on Official Letter Head of Bidder)

To,
The Director,
Directorate of Vocational Education and Training
3, Mahapalika Marg, Mumbai – 400001

Subject: Declaration of Local Content as per Preference to MII Order 2017

Reference: Tender No. Tender No.
Supply and Installation of Name of Group/ Item at Consignee Location

Dear Sir,

I, Mr./ Ms. Name of Authorized Representative undersigned, authorized representative of M/s <<Name of Company >> hereby certify that the quoted items offered by us against above enquiry is having local content of __%. Furthe, we qualify as (Class-I ☐ Local Supplier / Class- II ☐ Local Supplier / Non-Local Supplier ☐ - tick the appropriate category).

The above is in line with Order No. P-45021/2/2017-PP(BE-II)-Part 4 Vol II on Public Procurement (Preference to Make-in-India), Order 2017 Revision issued by Department of Promotion of Industry and Internal Trade, Govt of India.

I hereby declare that the details furnished above are true and correct to the best of my knowledge and belief and I undertake to inform you of any changes therein, immediately. In case any of the above information is found to be false, untrue, misleading, or misrepresenting, I am aware that I may be held liable for it.

Date: DD/MM/20YY

Signature of Authorized Representative of Bidder
Name of Authorized Representative of Bidder
Designation of Authorized Representative of Bidder
Duly authorized to sign this bid for and on behalf of
Bidder Name with Address

Seal of Bidder

Note:
1. Provide a certificate from statutory auditors/ cost accountant in case of Tenders above Rs 10 Crore for Class-I or Class-II Local Suppliers
2. Order No. P-45021/2/2017-PP(BE-II)-Part 4 Vol II on Public Procurement (Preference to Make-in-India), Order 2017 is available on following link: https://dpiit.gov.in/sites/default/files/PPP-MII_Revision_Order_19July2024.pdf

Annexure 16: List of Items for MAF and Turnover Compliance

Subject: List of Items for MAF and Turnover Compliance

Reference: Tender No. Tender No.
Supply and Installation of Name of Group/ Item at Consignee Location

BoQ S.N.	Name of Item	MAF Compliance	OEM Turnover Compliance
1	Steel Rule: 300 mm, Graduated both in Metric and English Unit	Yes	No
2	Steel Rule: 600 mm, Graduated both in Metric and English Unit	Yes	No
3	Gloves: Rubber	No	No
4	Industrial/ Safety Shoes	No	No
5	Industrial Helmet	No	No
6	V Block: 75 X 75 X 50 mm with Clamp	Yes	No
7	V Block: 150 x 100 x 75 mm with Clamp	Yes	No
8	Micrometer: Outside, 0 mm to 25 mm, LC = 0.01 mm	Yes	No
9	Micrometer: Outside, 25 mm to 50 mm, LC = 0.01 mm	Yes	No
10	Vernier Caliper: 0 mm to 180 mm, LC = 0.02 mm with fine adjustment	Yes	No
11	Micrometer: Inside, 5 mm to 30 mm	Yes	No
12	Engineer's Square: 150 mm Blade	Yes	No
13	Engineer's Square: 300 mm Blade	Yes	No
14	Angle Plate: Adjustable, 250 X 250 X 300 mm	Yes	No
15	Spirit Level: 150 mm	Yes	No
16	File: Warding, Smooth, 150 mm with Handle	Yes	No
17	File: Knife Edge, 150 mm with Handle	Yes	No
18	File: Cant Saw, Smooth, 150 mm with Handle	Yes	No
19	File: Feather Edge, 150 mm	Yes	No
20	File: Triangular, Smooth, 150 mm with Handle	Yes	No
21	File: Round, Second Cut, 200 mm with Handle	Yes	No
22	File: Square, Second Cut, 150 mm with Handle	Yes	No
23	File: Square, Second Cut, 250 mm with Handle	Yes	No
24	File: Triangular, Second Cut, 200 mm with Handle	Yes	No
25	File: Flat, Second Cut, 250 mm with Handle	Yes	No
26	File: Flat, Bastard, 200 mm with Handle	Yes	No
27	File: Flat, Bastard, 300 mm with Handle	Yes	No
28	File Set: Needle, 160 mm, Set of 12	Yes	No
29	File: Half Round, Second Cut, 250 mm with Handle	Yes	No
30	File: Flat, Bastard, 250 mm with Handle	Yes	No
31	File: Round, Bastard, 250 mm with Handle	Yes	No
32	File: Flat, Second Cut, 150 mm with Handle	Yes	No
33	File: Car Body, Bastard Cut without Tang, 300 mm with Handle	Yes	No
34	Oil Stone: 150 mm X 50 mm X 25 mm	Yes	No
35	Plier: Combination, 200 mm	Yes	No
36	Blow Lamp: 0.5 Liter	No	No
37	Spanner Set: Double Ended, 6 mm to 32 mm, Set of 12	Yes	No

38	Spanner: Adjustable, 150 mm	Yes	No
39	Spanner Set: Tubular Type, 6 mm to 32 mm, Set of 12	Yes	No
40	Magnifying Glass: 75 mm	No	No
41	Clamp: Toolmaker, 50 mm	Yes	No
42	Clamp: Toolmaker, 75 mm	Yes	No
43	Clamp: C, 50 mm	Yes	No
44	Clamp: C, 100 mm	Yes	No
45	Scraper Set: 200 mm, Triangular, Half Round and Flat	Yes	No
46	Chisel: Diamond Point, 9 mm X 150 mm	Yes	No
47	Chisel: Cold, 20 mm X 150 mm	Yes	No
48	Chisel: Cold, Round Nose, 9 mm X 100 mm	Yes	No
49	Motorized Tenon Saw	Yes	No
50	Hammer: Ball Peen, 800 grams with Handle	Yes	No
51	Hacksaw Frame: Adjustable, 250 mm to 300 mm	Yes	No
52	Hacksaw Blade: Length = 300 mm, Width = 12.5 mm, Thickness = 0.63 mm, TPI = 18, Low Alloy, Packet of 100 Blades	Yes	No
53	Hammer: Nylon, 30 mm with Handle	Yes	No
54	Precision Screw Driver: Set of 6	Yes	No
55	Screw Driver: Insulated, 10 X 250 mm	Yes	No
56	Screw Driver: Insulated, 4 X 150 mm	Yes	No
57	Screw Driver: Insulated, 6 X 150 mm	Yes	No
58	Screw Driver: Insulated, 8 X 200 mm	Yes	No
59	Screw Driver: Insulated, 8 X 300 mm	Yes	No
60	Screw Driver: Philips, Set of 5	Yes	No
61	Neon Tester: 500 V	Yes	No
62	Portable Electric Impact Drill Machine	Yes	No
63	Metal Cut-Off Circular Saw: Floor Standing	Yes	No
64	Portable Electric Hand Grinder: Straight	Yes	No
65	Portable Electric Air Blower	Yes	No
66	Portable Electric Jigsaw	Yes	No
67	Portable Electric Random Orbital Sander	Yes	No
68	Torque Wrench: Digital, 20 Nm to 280 Nm	Yes	No
69	Lifting Tackle/ Sling: 1 Ton, 2 meters	No	No
70	Air impact Wrench with Impact Sockets	Yes	No
71	Laser Light Pen: Green	No	No
72	Surface Plate: Cast Iron, 600 X 600 mm with Stand and Cover	Yes	No
73	Screw Pitch Gauge Set: Metric and British, 0.25 to 6 mm, 21 Leaves	Yes	No
74	Laser Distance Measuring Instrument	Yes	No
75	Palm Scale: Table Top, 1000gm	No	No
76	Allen Key Set: Hexagonal, 1.5 mm to 10 mm, Set of 9	Yes	No
77	Universal Quick Adjustable Multi-function Wrench Spanner Set	No	No
78	1/2 Inch Socket Set	Yes	No
79	Two Post Car Lift: Capacity 4 Ton, Electric Operated	Yes	Yes
80	Two Wheeler Scooter Assembly Set	Yes	Yes
81	Transmission Gearbox Trainer	Yes	Yes
82	Demonstration Board: Electric Vehicle Cooling System	Yes	Yes
83	Mini Commercial Electric Vehicle Chassis	Yes	Yes

84	Engine and Transmission System for Electric Vehicle	Yes	Yes
85	Cut Section of Electric Vehicle Motors	Yes	Yes
86	HVAC Trainer	Yes	Yes
87	Multifunction Installation Tester	Yes	Yes
88	Electric Vehicle Service Equipment Test Adapter Kit	Yes	Yes
89	AC EV Charger Setup	Yes	Yes
90	Battery Tester with inbuilt printer	Yes	No
91	Lighting and Wiring System for Electric Vehicle	Yes	Yes
92	Instructor/ Office Chair: Non-Revolving, Mid Back, Mesh	No	No
93	Instructor/ Office Table	No	No
94	Green Board: 4 X 6 Feet	No	No
95	Stool: Height 600 mm	No	No
96	Working Table: 8 (L) X 4 (W) X 3 (H) Feet, Wooden Top	No	No
97	Steel Cupboard: Large	No	No
98	Steel Book Case	No	No
99	7 Drawer Tool Trolley: W:D:H = 700:450:900, ± 25 mm	Yes	No
100	5 Tray Cantilever Tool Box: W:D:H = 450:200:200, ± 20 mm	Yes	No
101	Dummy/ Mannequins: Male, Fiber	No	No
102	Mobile Lockable Shoe Rack: 24 Pair	No	No
103	Three wheeler Electric Rickshaw	Yes	Yes
104	Four wheeler Buggy (Golf Cart)	Yes	Yes
105	Electric Vehicle Diagnostic Scanner	Yes	Yes
106	Solar based Charging System	Yes	Yes
107	Electric Vehicle Tool Kit	Yes	Yes
108	Electrically Insulating Blanket	Yes	No
109	Clamps for Insulating Blanket	Yes	No
110	Insulated Rubber Mats	No	No
111	Arc Flash Suit: 12 Cal/Cm2	No	No
112	Gloves: Electrically Insulated	No	No
113	Industrial/ Safety Shoes: Electrically Insulated	No	No
114	Glove Inflator Kit	No	No
115	Goggle: White Glass	No	No
116	Platform Trolley: 150 Kg	No	No
117	Multimeter: Digital, 3 ½ Digit	No	No
118	AC Current Digital Clamp Meter	Yes	No
119	Digital Continuity Tester	Yes	No
120	Tyre Pressure Gauge with Holding Nipple	Yes	No
121	Measuring Steel Tape: 5 meter	Yes	No
122	Soldering Iron Set: Mechanic Electric Vehicle	Yes	No

Annexure 17: Undertaking for Mobilization of Instructors and Training of Instructors

(To be printed on Rs. 500 Non-Judicial Stamp Paper: Notarized Affidavit)

To,
The Director,
Directorate of Vocational Education and Training
3, Mahapalika Marg, Mumbai – 400001

Subject: Undertaking for Mobilization of Instructors and Training of Instructors.

Reference: Tender No. Tender No.
Supply and Installation of Mechanic Electric Vehicle equipment and machine at Consignee Location

Dear Sir,
I, Mr./ Ms. Name undersigned, authorized representative of M/s Name of Bidder Company/ Firm, having our registered office at Registered Address, do hereby solemnly undertake and confirm the following :

1. Provision of training to DVET nominated instructors

   We undertake to Provide hands on training to minimum 2 instructors per set up on the Equipment provided and handhold the instructors during warranty period. The training shall be minimum 2 weeks (minimum 5 days per week). The training expenses shall be borne by supplier. The training may be split up across the semester/ annual depending on course curriculum and duration.

2. Mobilization of Instructor

   We undertake to identify and mobilize training Instructors as per qualification and experience mentioned by Directorate General of Training, New Delhi (DGT) for the respective Trade at consignee location if requested by DVET. The Cost of Such Instructors shall be borne by DVET.

This undertaking forms an integral part of our bid submission and shall be binding upon us if our tender is accepted.

Date: DD/MM/20YY

Signature of Authorized Representative of Bidder
Name of Authorized Representative of Bidder
Designation of Authorized Representative of Bidder
Duly authorized to sign this bid for and on behalf of
Bidder Name with Address

Seal of Bidder

Annexure 18: Proforma of Bidder's Request for Clarification

(To be printed on Official Letter Head of Bidder)

To,
The Director,
Directorate of Vocational Education and Training
3, Mahapalika Marg, Mumbai – 400001

Subject: Bidder's Request for Clarification

Reference: Tender No. Tender No.
Supply and Installation of Name of Group/ Item at Consignee Location

Bidder Details		Authorized Representative Details	
Name		Name	
Address		Designation	
Telephone		Mobile	
Website		E-Mail	

S.N.	Clause No.	Content of Tender requiring Clarification	Query/ Change Required and its explanation

Date: DD/MM/20YY

Signature of Authorized Representative of Bidder
Name of Authorized Representative of Bidder
Designation of Authorized Representative of Bidder
Duly authorized to sign this bid for and on behalf of
Bidder Name with Address

Seal of Bidder

Note:

1. Above signed Annexure in .pdf format to be sent by email to desk13@dvet.gov.in along with word/ excel copy on or before the date of the pre-bid meeting.

Annexure 19: List of items where Manufacturer's Authorization Certificate required And OEM mapping

Sr. No.	BoQ S.N.	Name of Item	Name of the OEM proposed in submitted proposal
1	1	Steel Rule: 300 mm, Graduated both in Metric and English Unit	
2	2	Steel Rule: 600 mm, Graduated both in Metric and English Unit	
3	6	V Block: 75 X 75 X 50 mm with Clamp	
4	7	V Block: 150 x 100 x 75 mm with Clamp	
5	8	Micrometer: Outside, 0 mm to 25 mm, LC = 0.01 mm	
6	9	Micrometer: Outside, 25 mm to 50 mm, LC = 0.01 mm	
7	10	Vernier Caliper: 0 mm to 180 mm, LC = 0.02 mm with fine adjustment	
8	11	Micrometer: Inside, 5 mm to 30 mm	
9	12	Engineer's Square: 150 mm Blade	
10	13	Engineer's Square: 300 mm Blade	
11	14	Angle Plate: Adjustable, 250 X 250 X 300 mm	
12	15	Spirit Level: 150 mm	
13	16	File: Warding, Smooth, 150 mm with Handle	
14	17	File: Knife Edge, 150 mm with Handle	
15	18	File: Cant Saw, Smooth, 150 mm with Handle	
16	19	File: Feather Edge, 150 mm	
17	20	File: Triangular, Smooth, 150 mm with Handle	
18	21	File: Round, Second Cut, 200 mm with Handle	
19	22	File: Square, Second Cut, 150 mm with Handle	
20	23	File: Square, Second Cut, 250 mm with Handle	
21	24	File: Triangular, Second Cut, 200 mm with Handle	
22	25	File: Flat, Second Cut, 250 mm with Handle	
23	26	File: Flat, Bastard, 200 mm with Handle	
24	27	File: Flat, Bastard, 300 mm with Handle	
25	28	File Set: Needle, 160 mm, Set of 12	
26	29	File: Half Round, Second Cut, 250 mm with Handle	
27	30	File: Flat, Bastard, 250 mm with Handle	
28	31	File: Round, Bastard, 250 mm with Handle	
29	32	File: Flat, Second Cut, 150 mm with Handle	
30	33	File: Car Body, Bastard Cut without Tang, 300 mm with Handle	
31	34	Oil Stone: 150 mm X 50 mm X 25 mm	
32	35	Plier: Combination, 200 mm	
33	37	Spanner Set: Double Ended, 6 mm to 32 mm, Set of 12	
34	38	Spanner: Adjustable, 150 mm	
35	39	Spanner Set: Tubular Type, 6 mm to 32 mm, Set of 12	
36	41	Clamp: Toolmaker, 50 mm	
37	42	Clamp: Toolmaker, 75 mm	
38	43	Clamp: C, 50 mm	
39	44	Clamp: C, 100 mm	

40	45	Scraper Set: 200 mm, Triangular, Half Round and Flat	
41	46	Chisel: Diamond Point, 9 mm X 150 mm	
42	47	Chisel: Cold, 20 mm X 150 mm	
43	48	Chisel: Cold, Round Nose, 9 mm X 100 mm	
44	49	Motorized Tenon Saw	
45	50	Hammer: Ball Peen, 800 grams with Handle	
46	51	Hacksaw Frame: Adjustable, 250 mm to 300 mm	
47	52	Hacksaw Blade: Length = 300 mm, Width = 12.5 mm, Thickness = 0.63 mm, TPI = 18, Low Alloy, Packet of 100 Blades	
48	53	Hammer: Nylon, 30 mm with Handle	
49	54	Precision Screw Driver: Set of 6	
50	55	Screw Driver: Insulated, 10 X 250 mm	
51	56	Screw Driver: Insulated, 4 X 150 mm	
52	57	Screw Driver: Insulated, 6 X 150 mm	
53	58	Screw Driver: Insulated, 8 X 200 mm	
54	59	Screw Driver: Insulated, 8 X 300 mm	
55	60	Screw Driver: Philips, Set of 5	
56	61	Neon Tester: 500 V	
57	62	Portable Electric Impact Drill Machine	
58	63	Metal Cut-Off Circular Saw: Floor Standing	
59	64	Portable Electric Hand Grinder: Straight	
60	65	Portable Electric Air Blower	
61	66	Portable Electric Jigsaw	
62	67	Portable Electric Random Orbital Sander	
63	68	Torque Wrench: Digital, 20 Nm to 280 Nm	
64	70	Air impact Wrench with Impact Sockets	
65	72	Surface Plate: Cast Iron, 600 X 600 mm with Stand and Cover	
66	73	Screw Pitch Gauge Set: Metric and British, 0.25 to 6 mm, 21 Leaves	
67	74	Laser Distance Measuring Instrument	
68	76	Allen Key Set: Hexagonal, 1.5 mm to 10 mm, Set of 9	
69	78	1/2 Inch Socket Set	
70	79	Two Post Car Lift: Capacity 4 Ton, Electric Operated	
71	80	Two Wheeler Scooter Assembly Set	
72	81	Transmission Gearbox Trainer	
73	82	Demonstration Board: Electric Vehicle Cooling System	
74	83	Mini Commercial Electric Vehicle Chassis	
75	84	Engine and Transmission System for Electric Vehicle	
76	85	Cut Section of Electric Vehicle Motors	
77	86	HVAC Trainer	
78	87	Multifunction Installation Tester	
79	88	Electric Vehicle Service Equipment Test Adapter Kit	
80	89	AC EV Charger Setup	
81	90	Battery Tester with inbuilt printer	
82	91	Lighting and Wiring System for Electric Vehicle	
83	92	Instructor/ Office Chair: Non-Revolving, Mid Back, Mesh	
84	93	Instructor/ Office Table	
85	94	Green Board: 4 X 6 Feet	
86	95	Stool: Height 600 mm	

87	96	Working Table: 8 (L) X 4 (W) X 3 (H) Feet, Wooden Top	
88	97	Steel Cupboard: Large	
89	98	Steel Book Case	
90	99	7 Drawer Tool Trolley: W:D:H = 700:450:900, ± 25 mm	
91	100	5 Tray Cantilever Tool Box: W:D:H = 450:200:200, ± 20 mm	
92	102	Mobile Lockable Shoe Rack: 24 Pair	
93	103	Three wheeler Electric Rickshaw	
94	104	Four wheeler Buggy (Golf Cart)	
95	105	Electric Vehicle Diagnostic Scanner	
96	106	Solar based Charging System	
97	107	Electric Vehicle Tool Kit	
98	108	Electrically Insulating Blanket	
99	109	Clamps for Insulating Blanket	
100	118	AC Current Digital Clamp Meter	
101	119	Digital Continuity Tester	
102	120	Tyre Pressure Gauge with Holding Nipple	
103	121	Measuring Steel Tape: 5 meter	
104	122	Soldering Iron Set: Mechanic Electric Vehicle	

Note:

1. OEM for above item with BoQ Sr.No. 79,80,81,82,83,84,85,86,87,88,89,91,103,104,105,106 and 107 should fulfill PQ4 – Financial Criteria for OEMs.

Name of the Bidder
Designation
Stamp of the Bidder
Date :

Annexure 20: OEM Performance Clause Compliance

We confirm that we comply with the "Performance Clause" as required in PQ Condition 6. The Invoices and POs of our OEM are enclosed.

Reference: Tender No. Tender No.
Supply and Installation of Name of Group/ Item at Consignee Location

SN	Item Name	PO no	Invoice No & date	Qty/Value	Buyer
1					
2					
3					
4					
5					
6					

This is to certify that supplies against the above invoices have been executed successfully.

Date: DD/MM/20YY

Signature of Authorized Representative of Bidder
Name of Authorized Representative of Bidder
Designation of Authorized Representative of Bidder
Duly authorized to sign this bid for and on behalf of
Bidder Name with Address

Seal of Bidder

SECTION 7: LIST OF DOCUMENTS TO BE UPLOADED ONLINE

Following documents, which ever are applicable as per Tender Document, shall be uploaded by the Bidder in the same order/ sequence as mentioned below, in the form of PDF files on the e-Tendering website during Online Bid Preparation stage. Documents not in sequence and page no. not mentioned shall be rejected.

7.1 Envelope No. 1: Technical Bid

S.N.		List of Documents	Page No.
1		Checklist of All Documents mentioned below	
2		Annexure 1: Covering Letter	
3		PQ Condition 1	
	3.2	Certificate of Registration / Certificate of Incorporation and Memorandum	
	3.1	PAN/TAN Copy	
4		PQ Condition 2	
	4.1	Annexure 2: Manufacturers' Authorization Certificate (MAF) of all OEMs	
	4.2	Manufacturing License OR	
	4.2	NSIC Certificate of all OEMs.	
5		PQ Condition 3	
	5.1	Annexure 3: Bidder Turnover Certificate for last 3 preceding financial years certified by CA	
	5.3	Bidders Balance sheets	
6		PQ Condition 4 Annexure 3: Original Equipment Manufacturer (OEM) Turnover Certificate for last 3 preceding financial years certified by CA	
7		PQ Condition 5 Affidavit from Bidder regarding compliance to PQ Condition 5	
8		PQ Condition 6 PO Copies/ Invoices/ Execution Certificates related to OEM regarding compliance to PQ condition 6.	
9		PQ Condition 7	
	9.1	GST Registration Certificate	
	9.2	GST Returns for last completed quarter	
10		Details of Bidder: Annexure 4	
11		Details of Manufacturing Facilities of OEMs: Annexure 5	
12		Performa of Past Performance other than DVET: Annexure 6A	
13		Past Performance with DVET: Annexure 6B	
14		Annexure 8: Technical Specifications Compliance & No Deviation Statement	
15		Annexure 12: Declaration	
16		Annexure 13: Power of Attorney	
17		Annexure 14: Undertaking as per Office Memorandum No.: F. No.6/18/2019-PPD dated 23.07.2020 for Bidder	
18		Annexure 15: Declaration of local content as per preference to MII Order 2017	
19		Technical Literature of the Equipment and Machinery	
20		ISO/ BIS/ ISI/ CE Mark Certificate or Similar (If available)	
21		Undertaking of Delivery within prescribed Delivery Period, Undertaking for Demo and Provide Sample and Undertaking about Risk Purchase, Fall Clause and Penalty Clause.	
22		Annexure 17: Undertaking for Mobilization of Instructors and Training of	

		Instructors	
23		Annexure 19 : List of Items where Manufacturer's Authorisation certificate required and OEM Mappings	
24		Annexure 20 : OEM Performance Clause Compliance	
25		Additional information related to tender	

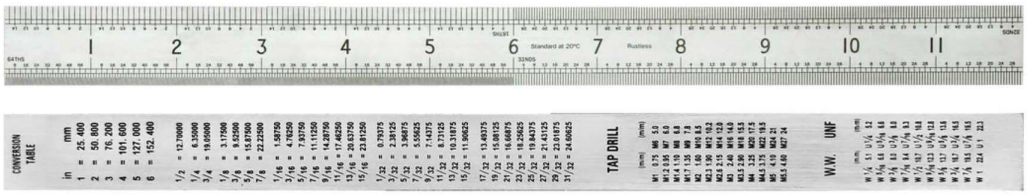
7.2 Envelope No. 2: Commercial Bid

S.N.	List of Documents
1	Annexure 7: Price Schedule

Annexure A: Technical Specification of Items
TABLE OF CONTENTS

1 Steel Rule: 300 mm, Graduated both in Metric and English Unit

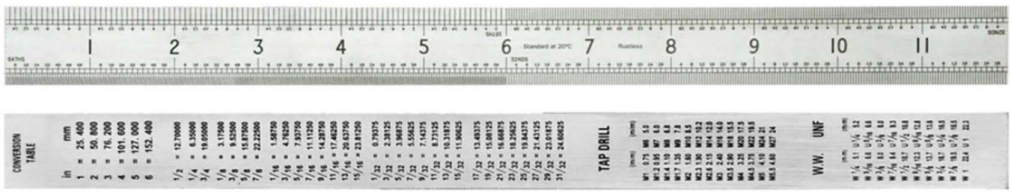
1.1 Basic Indicative Diagram



1.2	Material:	Stainless Steel
1.3	Thickness:	0.5 mm
1.4	Hardness:	30 - 35 HRC (Specially Hardened)
1.5	Finish:	Polished 2B / Anti-Glare Satin Chrome
1.6	Surface roughness:	0.6 Microns max
1.7	Range:	300 mm
1.8	Measuring least count:	Metric Graduation +0.5 mm and English graduation 1 /64 inch
1.9	Accuracy:	Metrology Standard EEC Class - I

2 Steel Rule: 600 mm, Graduated both in Metric and English Unit

2.1 Basic Indicative Diagram



2.2	Material:	Stainless Steel
2.3	Thickness:	0.5 mm
2.4	Hardness:	30 - 35 HRC (Specially Hardened)
2.5	Finish:	Polished 2B / Anti-Glare Satin Chrome
2.6	Surface roughness:	0.6 Microns max
2.7	Range:	600 mm
2.8	Measuring least count:	Metric Graduation +0.5 mm and English graduation 1 /64 inch
2.9	Accuracy:	Metrology Standard EEC Class - I

3 Gloves: Rubber

3.1 Basic Indicative Diagram

3.2 Class 0 electrical rubber gloves

3.3 Made from natural rubber
3.4 Length: 13 to 14 inch long
3.5 Gloves should be flexible
3.6 Thickness of latex should be less than 1 mm.
3.7 Gloves should be ISI certified

4 Industrial/ Safety Shoes

4.1 Basic Indicative Diagram

4.2 Compliance: Generally Conforming to IS-15298
4.3 Size : UK 7, UK 8 and UK 9 (Size to be confirmed from DVET)
4.4 Genuine Full Grain Leather Barton Print
4.5 Steel Toe as Per IS 15298 & EN 20345 Standards
4.6 Antistatic, Abrasion Resistant, Oil and Acid Resistant, Slip Resistant and Heat Resistant
4.7 Impact Resistance: Upto 200J
4.8 Red Mesh Breathable lining
4.9 Synthetic PU Crespy Black Collar with Extra Cushioning
4.10 Moulded Full Socks
4.11 Direct Injected light Weight PU Sole
4.12 Antistatic and Slip Resistant

5 Industrial Helmet

5.1 Basic Indicative Diagram

5.2 Made from polypropylene material (PPCT).
5.3 Should be provided with gear system
5.4 Should be provided with foam for absorbing sweat
5.5 Should be provided with ventilation

5.6 Should be provided with nylon strap
5.7 Should be made from all virgin material
5.8 CE approved
5.9 Color: Yellow

6 V Block: 75 X 75 X 50 mm with Clamp

6.1 Basic Indicative Diagram

6.2	Total Length:	75 mm ± 1mm
6.3	Total Width.:	75 mm ± 0.2 mm
6.4	Total Height:	50 mm ± 0.2 mm
6.5	Angle:	90 Degree
6.6	Veerun out:	10 µ
6.7	Clamping capacity:	25 mm

7 V Block: 150 X 100 X 75 mm with Clamp

7.1 Basic Indicative Diagram

7.2	Total Length:	150 mm ± 1mm
7.3	Total Width.:	100 mm ± 0.2 mm
7.4	Total Height:	75 mm ± 0.2 mm
7.5	Angle:	90 Degree
7.6	Veerun out:	10 µ
7.7	Clamping capacity:	50 mm

8 Micrometer: Outside, 0 mm to 25 mm, LC = 0.01 mm

8.1 Basic Indicative Diagram:

8.2	Compliance:	Generally Compliant to IS 2967 / 1938
8.3	Range:	0 mm -25 mm
8.4	Reading:	0.01 mm
8.5	Accuracy:	4 µm
8.6	Spindle Material:	Stainless Steel / Alloy steel
8.7	Standard Accessories:	
8.7.1	Suitable spanner,	
8.7.2	Wooden / Plastic Box with proper cushioning	
8.7.3	Operating Manual	

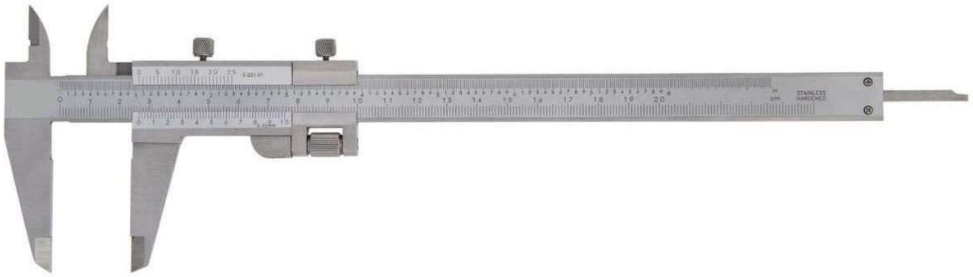
9 Micrometer: Outside, 25 mm to 50 mm, LC = 0.01 mm

9.1 Basic Indicative Diagram:

9.2	Compliance:	Generally Compliant to IS 2967 / 1938
9.3	Range:	25 mm -50 mm
9.4	Reading:	0.01 mm
9.5	Accuracy:	4 µm
9.6	Spindle Material:	Stainless Steel / Alloy Steel
9.7	Standard Accessories:	
9.7.1	Suitable spanner	
9.7.2	Distance Piece	
9.7.3	Wooden / Plastic Box with proper cushioning	
9.7.4	Operating Manual	

10 Vernier Caliper: 0 mm to 180 mm, LC = 0.02 mm with fine adjustment

10.1 Basic Indicative Diagram:



10.2	Compliance:	Generally Compliant to DIN 862
10.3	Range:	0 mm - 180 mm
10.4	Overall Length:	280 mm
10.5	Lower jaw length:	Min. 50 mm
10.6	Upper jaw length:	Min. 24 mm
10.7	Graduation:	0.02 mm
10.8	Accuracy:	± 0.05 mm
10.9	Material:	Stainless Steel / Alloy Steel

10.10 Standard Accessories:

10.10.1 Operating Manual

10.10.2 Wooden / Plastic Box with proper cushioning

11 Micrometer: Inside, 5 mm to 30 mm

11.1 Basic Indicative Diagram

11.2	Compliance:	Generally Compliant to IS 2967 / 1938
11.3	Range:	5 mm -30 mm
11.4	Reading:	0.01 mm
11.5	Accuracy:	± 5 µm
11.6	Spindle Material:	Stainless Steel / Alloy steel

11.7 Caliper type jaws are made of high-grade tool steel

11.8 Locking clamp for positive locking of spindle

11.9 Satin chrome finish

11.10 Spindle pitch 0.5 mm

11.11 Standard Accessories:

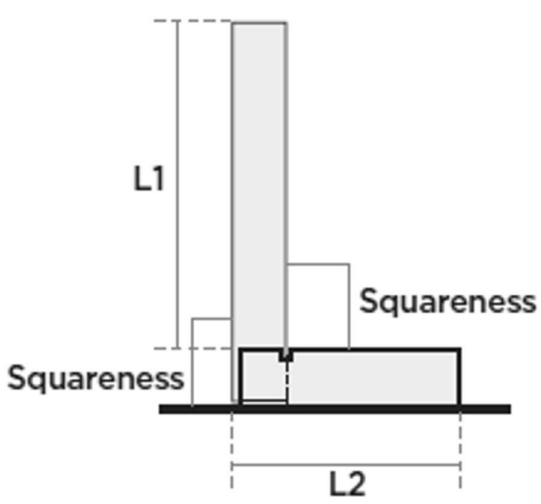
11.12 Suitable spanner,

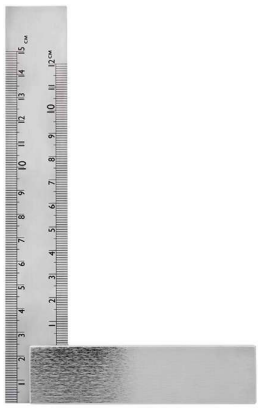
11.13 Wooden / Plastic Box with proper cushioning

11.14 Operating Manual

12 Engineer's Square: 150 mm Blade

12.1 Basic Indicative Diagram

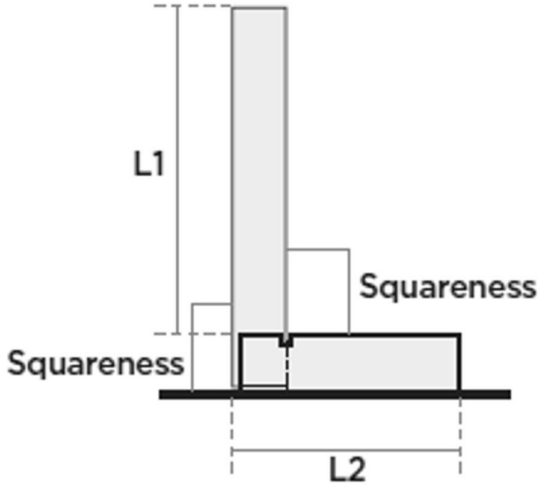


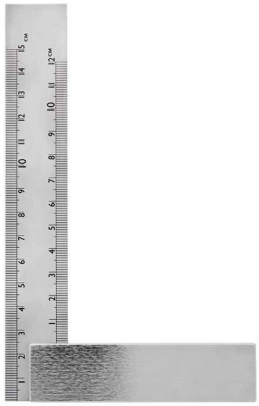


12.2	Blade length (L1):	150 mm
12.3	Stock length (L2):	100 mm
12.4	Squareness:	16 microns
12.5	Material for Blade:	Spring Steel
12.6	Stock:	MS
12.7	Hardness of Blade:	40 - 50 HRC
12.8	Groove on the inner corner of the stock	

13 Engineer's Square: 300 mm Blade

13.1 Basic Indcative Diagram





13.2	Blade length (L1):	300 mm
13.3	Stock length (L2):	200 mm
13.4	Squareness:	16 microns
13.5	Material for Blade:	Spring Steel
13.6	Stock:	MS
13.7	Hardness of Blade:	40 - 50 HRC
13.8	Groove on the inner corner of the stock	

14 Angle Plate: Adjustable, 250 X 250 X 300 mm

14.1 Basic Indicative Diagram

14.2 Dimensions
- 14.2.1 Length: 250 ± 4 mm
- 14.2.2 Width: 250 ± 4 mm
- 14.2.3 Height: 300 ± 4 mm

14.3 Body should be made of ductile Cast Iron.
14.4 Tilting Angle: 0 - 90 degree
14.5 Smooth tilting movement
14.6 Should be provided with swiveling face with machined “T” slots.
14.7 Working face flatness: 12 microns per 300 mm
14.8 Base of angle should be adjustable and with cutting slot for fixing.
14.9 “T” Slot of plate: M12

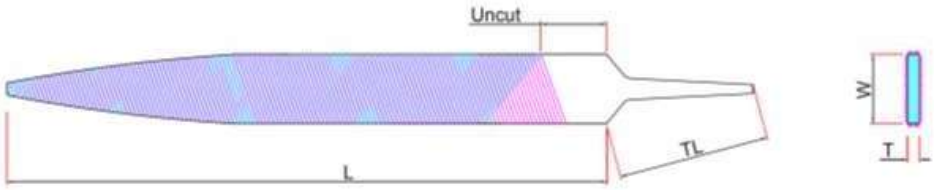
15 Spirit Level: 150 mm

15.1 Basic Indicative Diagram

15.2 Size: 150 mm
15.3 Accuracy: 0.50 mm/ meter
15.4 Precision milled base for high accuracy
15.5 Have a solid spirit bulb which doesn't break easily.
15.6 The Aluminum frame should be strong and precision extruded which increases accuracy and strength of the Spirit levels.
15.7 Two spirit bulbs to be provided so that it can be used horizontally & vertically
15.8 Rubber moulding is provided on the sides of the spirit levels to prevent damage to the body of the spirit levels.
15.9 Magnet should be provided at the base

16 File: Warding, Smooth, 150 mm with Handle

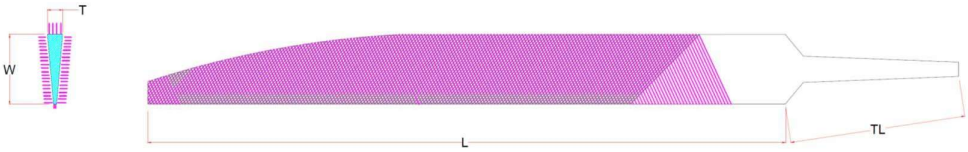
16.1 Basic Indicative Diagram



S.N.	Particulars	Range (mm)	
		From	To
16.2	Generally conforming to IS 1931-2000		
16.3	Body Length (L)	148	152
16.4	Tang Length (TL)	48	52
16.5	Width (W)	15.8	16.2
16.6	Thickness (T)	1.55	1.65
16.7	No. of Upcut / Inch	51	62
16.8	Overcut Inclination	49^{o}	51^{o}
16.9	Upcut inclination	64^{o}	66^{o}
16.10	Edge cut Inclination	89^{o}	91^{o}
16.11	Hardness	60 HRC	64 HRC
16.12	Rake Angle	-7^{0}	-12^{0}
16.13	Type of Cut	Double Cut	

17 File: Knife Edge, 150 mm with Handle

17.1 Basic Indicative Diagram



S.N.	Particulars	Range (mm)	
		From	To
17.2	Generally conforming to IS 1931-2000		
17.3	Body Length (L)	150	152
17.4	Tang Length (TL)	50	51
17.5	Width (W)	17.8	18.2
17.6	Thickness (T)	3.8	4.2
17.7	No. of Upcut / Inch	50	52
17.8	Upcut inclination	49^o	51^o
17.9	Overcut Inclination	64^o	66^o
17.10	Edge cut Inclination	89^o	91^o
17.11	Hardness	60 HRC	64 HRC
17.12	Rake Angle	-7^0	-12^0
17.13	Type of Cut	Double Cut	

18 File: Cant Saw, Smooth, 150 mm with Handle

18.1 Basic Indicative Diagram

S.N.	Particulars	Range (mm)	
		From	To
18.2	Generally conforming to IS 1931-2000		
18.3	Body Length (L)	149	152
18.4	Tang Length (TL)	48	52
18.5	Width (W)	13.3	13.7
18.6	No. of Upcut / Inch	48	52
18.7	Upcut inclination	49^o	51^o
18.8	Edge cut Inclination	89^o	91^o
18.9	Hardness	60 HRC	64 HRC

19 File: Feather Edge, 150 mm

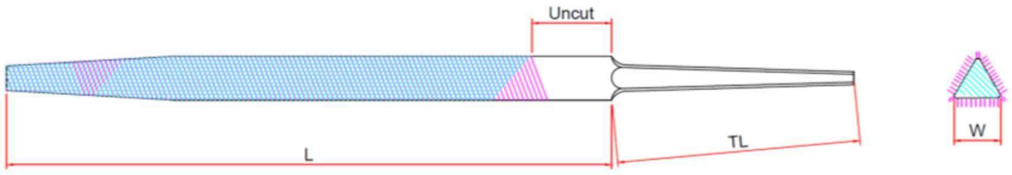
19.1 Basic Indicative Diagram

19.2 Length: 150 mm

19.3 Width: 27.3 mm
19.4 Thickness: 9.6 mm
19.5 Profile: Feather edge, two tanged
19.6 All sides with single cut
19.7 Suitable for fine filing and sharpening saws with a feather edge profile
19.8 The file should be manufactured with high-quality steel to ensure durability and consistent performance.
19.9 The file must have a smooth and uniform finish on all sides.
19.10 Each file must be free from rust, cracks, and manufacturing defects.

20 File: Triangular, Smooth, 150 mm with Handle

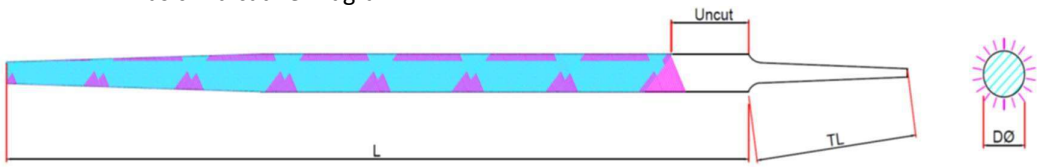
20.1 Basic Indicative Diagram



S.N.	Particulars	Range (mm)	
		From	To
20.2	Generally conforming to IS 1931-2000		
20.3	Body Length (L)	147	153
20.4	Tang Length (TL)	48	52
20.5	Width (W)	10.8	11.2
20.6	No. of Upcut / Inch	49	51
20.7	Upcut inclination	49^{o}	51^{o}
20.8	Overcut Inclination	64^{o}	66^{o}
20.9	Hardness	60 HRC	64 HRC
20.10	Rake Angle	-7^{0}	-12^{0}
20.11	Type of Cut	Double Cut	

21 File: Round, Second Cut, 200 mm with Handle

21.1 Basic Indicative Diagram

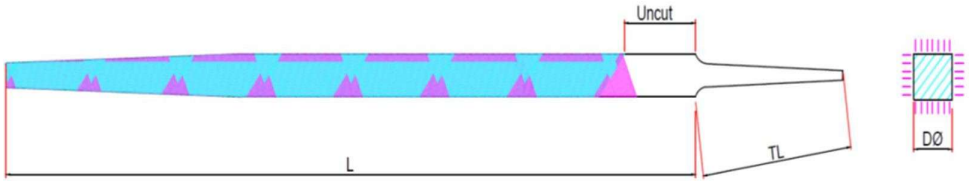


S.N.	Particulars	Range (mm)	
		From	To
21.2	Generally conforming to IS 1931-2000		
21.3	Body Length (L)	198	202
21.4	Tang Length (TL)	58	62
21.5	Diameter (Ø)	7.4	7.6
21.6	No. of Upcut / Inch	30	32
21.7	Upcut inclination	49^{o}	51^{o}
21.8	Overcut Inclination	64^{o}	66^{o}
21.9	Hardness	60 HRC	64 HRC

S.N.	Particulars	Range (mm)	
		From	To
21.10	Rake Angle	-7^0	-12^0
21.11	Type of Cut	Double Cut	

22 File: Square, Second Cut, 150 mm with Handle

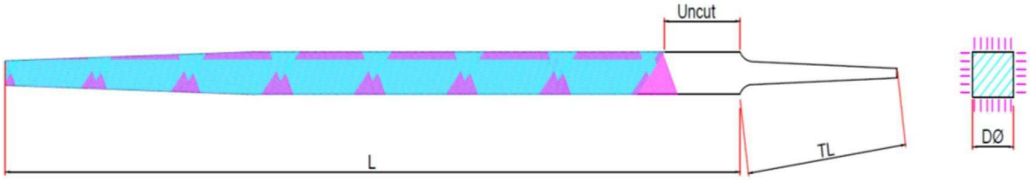
22.1 Basic Indicative Diagram



S.N.	Particulars	Range (mm)	
		From	To
22.2	Generally conforming to IS 1931-2000		
22.3	Body Length (L)	147	153
22.4	Tang Length (TL)	48	52
22.5	Square Side	5.8	6.2
22.6	No. of Upcut / Inch	40	42
22.7	Upcut inclination	49^o	51^o
22.8	Overcut Inclination	64^o	66^o
22.9	Hardness	60 HRC	64 HRC
22.10	Rake Angle	-7^0	-12^0
22.11	Type of Cut	Double Cut	

23 File: Square, Second Cut, 250 mm with Handle

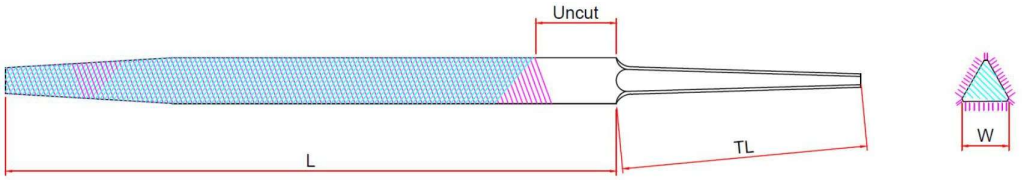
23.1 Basic Indicative Diagram



S.N.	Particulars	Range (mm)	
		From	To
23.2	Generally conforming to IS 1931-2000		
23.3	Body Length (L)	247	253
23.4	Tang Length (TL)	68	72
23.5	Square Side	9.8	10.2
23.6	No. of Upcut / Inch	30	31
23.7	Upcut inclination	49^o	51^o
23.8	Overcut Inclination	64^o	66^o
23.9	Hardness	60 HRC	64 HRC
23.10	Rake Angle	-7^0	-12^0
23.11	Type of Cut	Double Cut	

24 File: Triangular, Second Cut, 200 mm with Handle

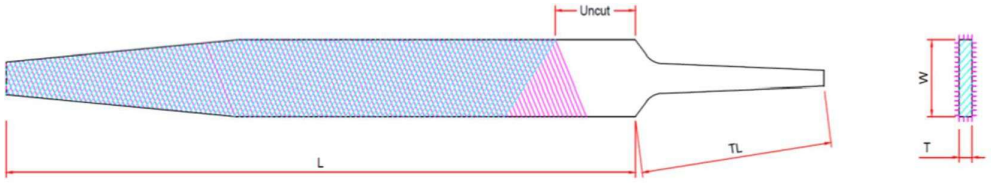
24.1 Basic Indicative Diagram



S.N.	Particulars	Range (mm)	
		From	To
24.2	Generally conforming to IS 1931-2000		
24.3	Body Length (L)	197	203
24.4	Tang Length (TL)	58	62
24.5	Equilateral Triangle Side (W)	14.8	15.2
24.6	No. of Upcut / Inch	31	32
24.7	Upcut inclination	49^o	51^o
24.8	Overcut Inclination	64^o	66^o
24.9	Hardness	60 HRC	64 HRC
24.10	Rake Angle	-7^0	-12^0
24.11	Type of Cut	Double Cut	

25 File: Flat, Second Cut, 250 mm with Handle

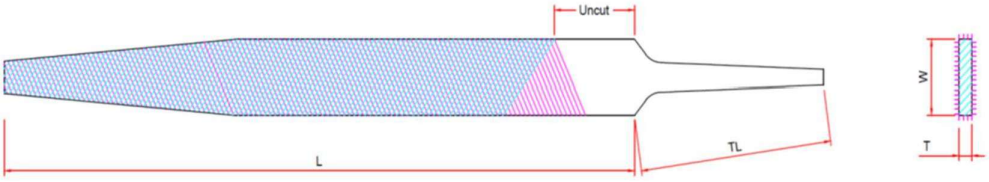
25.1 Basic Indicative Diagram



S.N.	Particulars	Range (mm)	
		From	To
25.2	Generally conforming to IS 1931-2000		
25.3	Body Length (L)	248	252
25.4	Tang Length (TL)	68	72
25.5	Width (W)	24.8	25.2
25.6	Thickness (T)	5.8	6.2
25.7	No. of Upcut / Inch	26	28
25.8	Upcut inclination	49^o	51^o
25.9	Overcut Inclination	64^o	66^o
25.10	Edge cut Inclination	89^o	91^o
25.11	Hardness	60 HRC	64 HRC
25.12	Rake Angle	-7^0	-12^0
25.13	Type of Cut	Double Cut	

26 File: Flat, Bastard, 200 mm with Handle

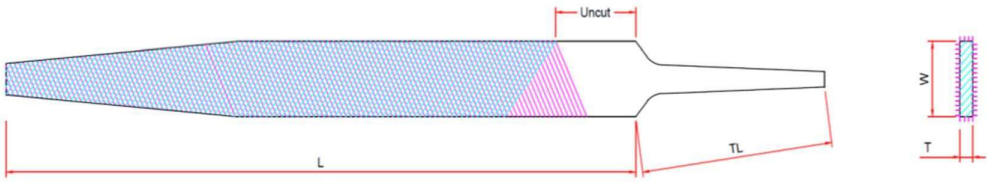
26.1 Basic Indicative Diagram



S.N.	Particulars	Range (mm)	
		From	To
26.2	Generally conforming to IS 1931-2000		
26.3	Body Length (L)	198	202
26.4	Tang Length (TL)	58	62
26.5	Width (W)	19.6	20.6
26.6	Thickness (T)	4.8	5.2
26.7	No. of Upcut / Inch	24	26
26.8	Upcut inclination	49°	51°
26.9	Overcut Inclination	64°	66°
26.10	Edge cut Inclination	89°	91°
26.11	Hardness	60 HRC	64 HRC
26.12	Rake Angle	-7^0	-12^0
26.13	Type of Cut	Double Cut	

27 File: Flat, Bastard, 300 mm with Handle

27.1 Basic Indicative Diagram



S.N.	Particulars	Range (mm)	
		From	To
27.2	Generally conforming to IS 1931-2000		
27.3	Body Length (L)	298	302
27.4	Tang Length (TL)	78	82
27.5	Width (W)	29.5	30.5
27.6	Thickness (T)	6.4	6.6
27.7	No. of Upcut / Inch	17	18
27.8	Upcut inclination	49°	51°
27.9	Overcut Inclination	64°	66°
27.10	Edge cut Inclination	89°	91°
27.11	Hardness	60 HRC	64 HRC
27.12	Rake Angle	-7^0	-12^0
27.13	Type of Cut	Double Cut	

28 File Set: Needle, 160 mm, Set of 12

28.1 Set consists of 12 Needle Files

28.2 File: Needle, Barrette, 160 mm

28.2.1 Basic Indicative Diagram

S.N.	Particulars	Range (mm)	
		From	To
28.2.2	Generally conforming to IS 3152-1980		
28.2.3	Total Length (L)	158	162
28.2.4	Tang Dia	3.0	3.4
28.2.5	Width (W)	5.1	5.9
28.2.6	Thickness (T)	2	2.4
28.2.7	Length of cut		
28.2.8	• 0 Cut	45	55
28.2.9	• 2 Cut	72	85
28.2.10	Upcut inclination	49^o	51^o
28.2.11	Overcut Inclination	64^o	66^o
28.2.12	Hardness	58 HRC	60 HRC

28.3 File: Needle, Crossing, 160 mm

28.3.1 Basic Indicative Diagram

S.N.	Particulars	Range (mm)	
		From	To
28.3.2	Generally conforming to IS 3152-1980		
28.3.3	Total Length (L)	158	162
28.3.4	Tang Dia	3.0	3.4
28.3.5	Width (W)	5.15	5.95
28.3.6	Thickness (T)	1.8	2.2
28.3.7	No. of Upcut / Inch Etching		
28.3.8	• 0 Cut	45	55
28.3.9	• 2 Cut	72	85
28.3.10	Upcut inclination	49^o	51^o
28.3.11	Overcut Inclination	64^o	66^o
28.3.12	Hardness	58 HRC	60 HRC

28.4 File: Needle, Flat, 160 mm

28.4.1 Basic Indicative Diagram

S.N.	Particulars	Range (mm)	
		From	To
28.4.2	Generally conforming to IS 3152-1980		

S.N.	Particulars	Range (mm)	
		From	To
28.4.3	Total Length (L)	158	162
28.4.4	Tang Dia	3.0	3.4
28.4.5	Width (W)	5.5	6.3
28.4.6	Thickness (T)	1.2	1.6
28.4.7	No. of Upcut / Inch Chisel Cut		
28.4.8	• 0 Cut	45	55
28.4.9	• 2 Cut	72	85
28.4.10	Upcut inclination	49°	51°
28.4.11	Overcut Inclination	64°	66°
28.4.12	Hardness	58 HRC	60 HRC

28.5 File: Needle, Half Round, 160 mm

28.5.1 Basic Indicative Diagram

S.N.	Particulars	Range (mm)	
		From	To
28.5.2	Generally conforming to IS 3152-1980		
28.5.3	Total Length (L)	158	162
28.5.4	Tang Dia	3.0	3.4
28.5.5	Width (W)	5.5	6
28.5.6	Thickness (T)	1.6	2
28.5.7	No. of Upcut / Inch for Flat Side Chisel Cut (For Round Side Etching)		
28.5.8	• 0 Cut	45	55
28.5.9	• 2 Cut	72	85
28.5.10	Upcut inclination	49°	51°
28.5.11	Overcut Inclination	64°	66°
28.5.12	Hardness	58 HRC	60 HRC

28.6 File: Needle, Hand Tre, 160 mm

28.6.1 Basic Indicative Diagram

S.N.	Particulars	Range (mm)	
		From	To
28.6.2	Generally conforming to IS 3152-1980		
28.6.3	Total Length (L)	158	162
28.6.4	Tang Dia	3.0	3.4
28.6.5	Width (W)	5.4	6.2
28.6.6	Thickness (T)	1.3	1.7
28.6.7	No. of Upcut / Inch Chisel Cut (Only edge cutting)		
28.6.8	• 0 Cut	45	55
28.6.9	• 2 Cut	72	85
28.6.10	Upcut inclination (Only edge cutting)	49°	51°

S.N.	Particulars	Range (mm)	
		From	To
28.6.11	Overcut Inclination (Only edge cutting)	64°	66°
28.6.12	Hardness	58 HRC	60 HRC

28.7 File: Needle, Hand, 160 mm

28.7.1 Basic Indicative Diagram

S.N.	Particulars	Range (mm)	
		From	To
28.7.2	Generally conforming to IS 3152-1980		
28.7.3	Total Length (L)	158	162
28.7.4	Tang Dia	3.0	3.4
28.7.5	Width (W)	5	5.8
28.7.6	Thickness (T)	1.4	1.8
28.7.7	No. of Upcut / Inch Chisel Cut		
28.7.8	• 0 Cut	45	55
28.7.9	• 2 Cut	72	85
28.7.10	Upcut inclination	49°	51°
28.7.11	Overcut Inclination	64°	66°
28.7.12	Hardness	58 HRC	60 HRC

28.8 File: Needle, Knife, 160 mm

28.8.1 Basic Indicative Diagram

S.N.	Particulars	Range (mm)	
		From	To
28.8.2	Generally conforming to IS 3152-1980		
28.8.3	Total Length (L)	158	162
28.8.4	Tang Dia	3.0	3.4
28.8.5	Width (W)	5.45	6.35
28.8.6	Thickness (T)	2	2.4
28.8.7	No. of Upcut / Inch Chisel Cut		
28.8.8	• 0 Cut	45	55
28.8.9	• 2 Cut	72	85
28.8.10	Upcut inclination	49°	51°
28.8.11	Overcut Inclination	64°	66°
28.8.12	Hardness	58 HRC	60 HRC

28.9 File: Needle, Marking, 160 mm

28.9.1 Basic Indicative Diagram

S.N.	Particulars	Range (mm)	
		From	To
28.9.2	Generally conforming to IS 3152-1980		
28.9.3	Total Length (L)	158	162
28.9.4	Tang Dia	3.0	3.4
28.9.5	Width (W)	5.4	6.2
28.9.6	Thickness (T)	1.55	1.95
28.9.7	No. of Upcut / Inch Etching (Cutting on Round side flat side no cutting)		
28.9.8	• 0 Cut	45	55
28.9.9	• 2 Cut	72	85
28.9.10	Upcut inclination (Cutting on Round side flat side no cutting)	49°	51°
28.9.11	Overcut Inclination (Cutting on Round side flat side no cutting)	64°	66°
28.9.12	Hardness	58 HRC	60 HRC

28.10 File: Needle, Round, 160 mm

28.10.1 Basic Indicative Diagram

S.N.	Particulars	Range (mm)	
		From	To
28.10.2	Generally conforming to IS 3152-1980		
28.10.3	Total Length (L)	158	162
28.10.4	Tang Dia	3.0	3.4
28.10.5	Body Dia	2.9	3.7
28.10.6	No. of Upcut / Inch Etching		
28.10.7	• 0 Cut	45	55
28.10.8	• 2 Cut	72	85
28.10.9	Upcut inclination	49°	51°
28.10.10	Overcut Inclination	64°	66°
28.10.11	Hardness	58 HRC	60 HRC

28.11 File: Needle, Slitting, 160 mm

28.11.1 Basic Indicative Diagram

S.N.	Particulars	Range (mm)	
		From	To
28.11.2	Generally conforming to IS 3152-1980		
28.11.3	Total Length (L)	158	162
28.11.4	Tang Dia	3.0	3.4
28.11.5	Width (W)	5.55	6.35
28.11.6	Thickness (T)	2	2.4
28.11.7	No. of Upcut / Inch Etching		
28.11.8	• 0 Cut	45	55
28.11.9	• 2 Cut	72	85

S.N.	Particulars	Range (mm)	
		From	To
28.11.10	Upcut inclination	49^o	51^o
28.11.11	Overcut Inclination	64^o	66^o
28.11.12	Hardness	58 HRC	60 HRC

28.12 File: Needle, Square, 160 mm

28.12.1 Basic Indicative Diagram

S.N.	Particulars	Range (mm)	
		From	To
28.12.2	Generally conforming to IS 3152-1980		
28.12.3	Total Length (L)	158	162
28.12.4	Tang Dia	3.0	3.4
28.12.5	Width (W)	2.5	3.3
28.12.6	No. of Upcut / Inch Chisel Cut		
28.12.7	• 0 Cut	45	55
28.12.8	• 2 Cut	72	85
28.12.9	Upcut inclination	49°	51°
28.12.10	Overcut Inclination	64°	66°
28.12.11	Hardness	58 HRC	60 HRC

28.13 File: Needle, Triangular, 160 mm

28.13.1 Basic Indicative Diagram

S.N.	Particulars	Range (mm)	
		From	To
28.13.2	Generally conforming to IS 3152-1980		
28.13.3	Total Length (L)	158	162
28.13.4	Tang Dia	3.0	3.4
28.13.5	Width (W)	3.5	4.3
28.13.6	No. of Upcut / Inch Chisel Cut		
28.13.7	• 0 Cut	45	55
28.13.8	• 2 Cut	72	85
28.13.9	Upcut inclination	49°	51°
28.13.10	Overcut Inclination	64°	66°
28.13.11	Hardness	58 HRC	60 HRC

28.14 Packaging:

28.14.1 Box made of Metal/ Wood/ Plastic

28.14.2 Each file to be placed in box in such a way to be separated from each other to prevent damage from clashing, ensure protection, accessibility and convenience for users

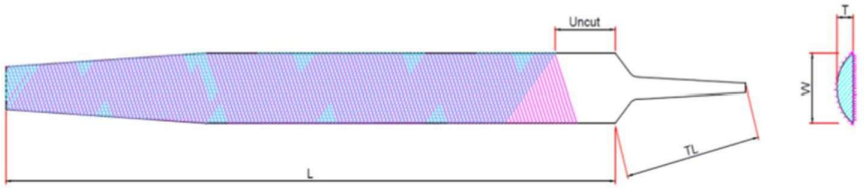
28.14.3 In case of metal box, it should be painted/ powder coated to provide resistance to corrosion and protect files from environmental factors.

28.14.4 Box should have a compact design for easy storage and transportation

28.14.5 Box should be able to carry the weight of the file set comfortably.

29 File: Half Round, Second Cut, 250 mm with Handle

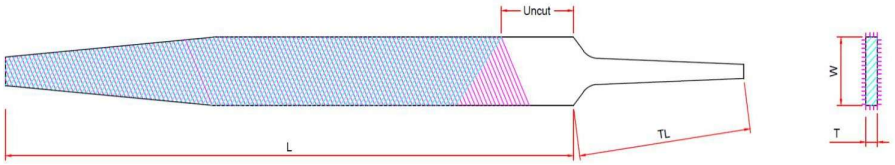
29.1 Basic Indicative Diagram



S.N.	Particulars	Range (mm)	
		From	To
29.2	Generally conforming to IS 1931-2000		
29.3	Body Length (L)	250	252
29.4	Tang Length (TL)	68	72
29.5	Width (W)	23.70	24.7
29.6	Thickness (T)	6.55	7.25
29.7	No. of Upcut / Inch	27-28 F/S	25-26 R/S
29.8	Upcut inclination	49°	51°
29.9	Overcut Inclination	64°	66°
29.10	Edge cut Inclination	89°	91°
29.11	Hardness	60 HRC	64 HRC
29.12	Rake Angle	-7^0	-12^0
29.13	Type of Cut	Double Cut	

30 File: Flat, Bastard, 250 mm with Handle

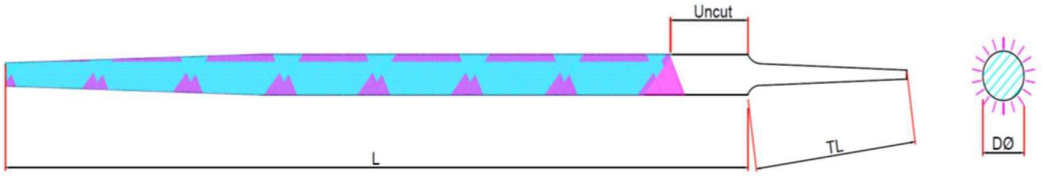
30.1 Basic Indicative Diagram



S.N.	Particulars	Range (mm)	
		From	To
30.2	Generally conforming to IS 1931-2000		
30.3	Body Length (L)	247	253
30.4	Tang Length (TL)	68	72
30.5	Width (W)	24.8	25
30.6	Thickness (T)	5.8	6.2
30.7	No. of Upcut / Inch	19	21
30.8	Upcut inclination	49°	51°
30.9	Overcut Inclination	64°	66°
30.10	Edge cut Inclination	89°	91°
30.11	Hardness	60 HRC	64 HRC
30.12	Rake Angle	-7^0	-12^0
30.13	Type of Cut	Double Cut	

31 File: Round, Bastard, 250 mm with Handle

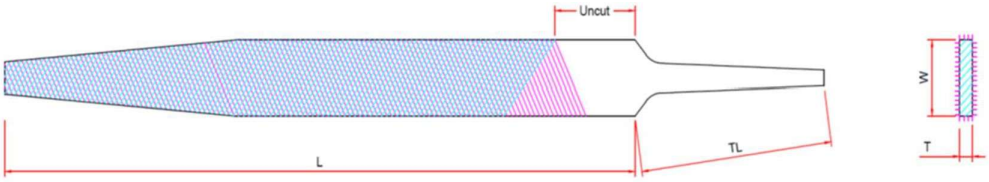
31.1 Basic Indicative Diagram



S.N.	Particulars	Range (mm)	
		From	To
31.2	Generally conforming to IS 1931-2000		
31.3	Body Length (L)	248	252
31.4	Tang Length (TL)	68	72
31.5	Diameter (Ø)	9.4	9.6
31.6	No. of Upcut / Inch	22	23
31.7	Upcut inclination	49°	51°
31.8	Overcut Inclination	64°	66°
31.9	Hardness	60 HRC	64 HRC
31.10	Rake Angle	-7^0	-12^0
31.11	Type of Cut	Double Cut	

32 File: Flat, Second Cut, 150 mm with Handle

32.1 Basic Indicative Diagram



S.N.	Particulars	Range (mm)	
		From	To
32.2	Generally conforming to IS 1931-2000		
32.3	Body Length (L)	148	152
32.4	Tang Length (TL)	48	52
32.5	Width (W)	15.8	16.2
32.6	Thickness (T)	3.8	4.2
32.7	No. of Upcut / Inch	26	38
32.8	Upcut inclination	49°	51°
32.9	Overcut Inclination	64°	66°
32.10	Edge cut Inclination	89°	91°
32.11	Hardness	60 HRC	64 HRC
32.12	Rake Angle	-7^0	-12^0
32.13	Type of Cut	Double Cut	

33 File: Car Body, Bastard Cut without Tang, 300 mm with Handle

33.1 Basic Indicative Diagram

S.N.	Particulars	Range (mm)	
		From	To
33.2	Generally conforming to IS 1931-2000		
33.3	Body Length (L)	289	301
33.4	Width (W)	29.3	29.7
33.5	Thickness (T)	5.6	5.8
33.6	No. of Cuts/ Inch	10	10
33.7	Hole Dia (Approx)	1/4”	1/4”
33.8	Distance Between Holes (Approx)	10x13/64”	10x13/64”
33.9	Uncut	N.A.	N.A.
33.10	Hardness	63 HRC	65 HRC

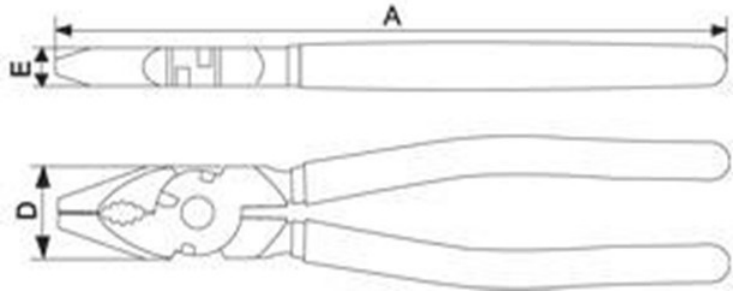
34 Oil Stone: 150 mm X 50 mm X 25 mm

34.1 Basic Indicative Diagram

34.2 Length: 150 mm
34.3 Width: 50 mm
34.4 Height H1: Course - 15 mm
34.5 Height H2: Fine - 10 mm
34.6 Material: SiC (Silicon Carbide)
34.7 Bond: Vitrified

35 Plier: Combination, 200 mm

35.1 Basic Indicative Diagram



35.2 Generally conform to IS 3650 - 1981
35.3 Material: C - 70
35.4 Finish: Polished / Chrome plated / Satin finish

35.5 Length (A): 200 mm
35.6 Drop forged, hardened tempered
35.7 Differential hardening
35.8 Radius Gap from front side: Upto 0.2 mm
35.9 Play between shanks: Upto 0.3 mm
35.10 Shank Material: C70 / EN9
35.11 Rivet material: SAE 1541 / 40Cr4
35.12 Cutting Edge Hardness: 60 - 62 HRC
35.13 Shank Hardness: 40 - 48 HRC
35.14 Rivet Hardness: 38 - 42 HRC
35.15 High Voltage Insulation: Should be able to withstand 4000 V DC or 2800 V AC
35.16 Insulation Sleeves made from High Quality CA Plastic
35.17 Thicker Sleeves for comfortable Grip
35.18 Special thumb protector for sleeves to minimize the risk of electric shock in case plier slips while in use.
35.19 Should be able to cut soft (74 to 84 Kg/mm²) & Hard (140 Kg/mm²) wires
35.20 Should be able to cut 2 mm of hardwire Diameter & 1 mm of soft wire Diameter

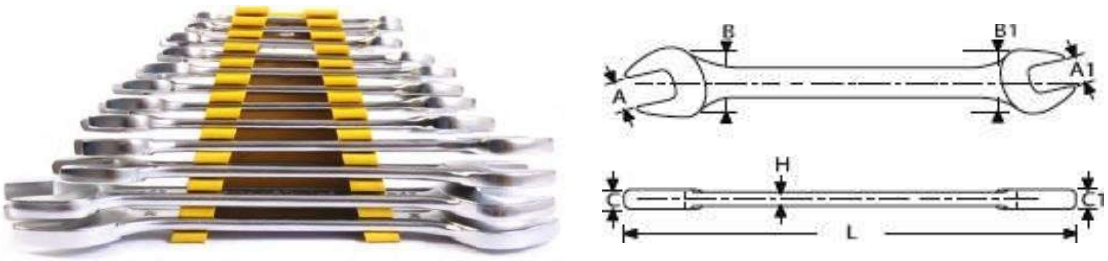
36 Blow Lamp: 0.5 Liter

36.1 Basic Indicative Diagram

36.2 Generally conform to IS 841-1983
36.3 Material Used: Brass and Iron Steel
36.4 Additional Name: Brass Pressure Kerosene Blow Lamp
36.5 Torch Type Soldering Torch, Brazing Torch
36.6 Should be Longer service life: Smooth-finish
36.7 Should be Resistance against corrosion
36.8 Should be Precisely designed
36.9 Top quality, extremely durable
36.10 Capacity: 0.5 Liters (±10%)

37 Spanner Set: Double Ended, 6 mm to 32 mm, Set of 12

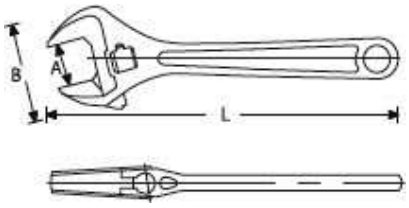
37.1 Basic Indicative Diagram



37.2 Generally Conform to IS 2028 - 1998
37.3 Sizes: 6X7, 8X9, 10X11, 12X13, 14X15, 16X17, 18X19, 20X22, 21X23, 24X27, 25X28, 30X32 mm
37.4 Slightly Rounded handles - Sand Blasted
37.5 Non Damaging Grip on nut due to close wrench opening tolerances
37.6 I - section design of handle and heads to combine strength and low weight
37.7 Salt Spray Test should be conducted
37.8 Should not have Sharp Cuts, Pit Marks, Cutting Burs
37.9 Should have Anti - Slip design Feature
37.10 Thoroughly corrosion protected with Nickel chrome finish
37.11 Deep forged from Chrome vanadium Steel (31CrV3)
37.12 Hardness: 42 - 45 HRC
37.13 Head at each end are of different sizes and set at an angle of 15 degrees
37.14 Web should be provided in forging
37.15 Minimum Torque Values in Kg.m
37.15.1 Nominal Width A/F 6-0.6, 7-0.9, 8-1.3, 9-1.9, 10-2.5, 11-3.3, 12-4.2
37.15.2 Nominal Width A/F 13-5.3, 14-6.5, 15-7.8, 16-9.4, 17-10.9, 18-13.0
37.15.3 Nominal Width A/F 19-15.2, 20-17.50, 21-20.20, 22-22.9, 23-26.0, 24-29.3
37.15.4 Nominal Width A/F 25-32.8, 26-36.6, 27-40.7, 28-45.0, 30-54.6, 32-65.50

38 Spanner: Adjustable, 150 mm

38.1 Basic Indicative Diagram



38.2 Generally Conform to IS 6149 - 1984 Grade II
38.3 Length (L): 150 mm
38.4 Plain Carbon Steel/ Cr - V Steel
38.5 Knurl adjusting mechanism for quick & precise adjustment
38.6 Built - in tension spring stabilizes movable jaw.
38.7 Laser - etched mm jaw scale for easy adjustment
38.8 Drop forged with high grade forging Steel
38.9 Play between jaws: 1.20 mm (maximum)
38.10 Hardness: 40 - 50 HRC
38.11 Minimum Torque Value: 8 Kg.m
38.12 Maximum Opening (A): 19 mm
38.13 Made with 15 degree head angle to allow use in narrow spaces having arc movement of
38.14 only 30 degree
38.15 Jaw Shank should not protrude out even when fully opened. In full condition, movable jaw should align with outer radius of the handle.
38.16 Adjustable Wrenches Black Phosphate Finish
38.17 Light weight handle design

39 Spanner Set: Box Type, 6 mm to 32 mm, Set of 12

39.1 Basic Indicative Diagram

39.2 Generally conforming to I.S 2030 - 1989
39.3 Made from tubular section of Steel
39.4 Heat treated to give maximum strength
39.5 Hardness: 29 to 34 HRC (carburizing depth minimum up to 0.3 mm)
39.6 Body and Hexagon should have good alignment and ends should be square with axis
39.7 Bright Zinc plating for rust protection
39.8 Sizes in mm: 6X7, 8X9, 10X11, 12X13, 14X15, 16X17, 18X19, 20X22, 21X23, 24X27, 25X28, 30X32

40 Magnifying Glass: 75 mm

40.1 Basic Indicative Diagram

40.2 Type: Handheld Magnifying Glass
40.3 Lens diameter: 75 mm
40.4 Magnification Power: 10X
40.5 Lens Material: High-grade optical glass or acrylic
40.6 Lens Quality: Distortion-free, scratch-resistant coating
40.7 Optical Clarity: 95% light transmission minimum
40.8 LED Illumination
40.9 Body material: Plastic

41 Clamp: Toolmaker, 50 mm

41.1 Basic Indicative Diagram

41.2 Maximum Jaw Opening: 50 mm
41.3 Throat Depth: 40 mm
41.4 Overall Length: 140 mm
41.5 Overall Height: 65 mm
41.6 Weight: 0.8 kg
41.7 Material and Construction:
- 41.7.1 Material: High-grade cast iron with stress-relieved structure
- 41.7.2 Finish: Black oxide coating for corrosion resistance
- 41.7.3 Machined Surfaces: Ground to achieve flatness within 0.02mm

41.8 Jaw Specifications
- 41.8.1 Fixed Jaw: Integral with body, hardened to 58-62 HRC
- 41.8.2 Moving Jaw: Hardened steel insert, 58-62 HRC
- 41.8.3 Jaw Face Parallelism: Within 0.05mm over full opening range

41.9 Screw Mechanism
- 41.9.1 Thread: Acme thread, precision ground
- 41.9.2 Material: Alloy steel, hardened and tempered
- 41.9.3 Handle: Drop-forged steel with knurled grip
- 41.9.4 Thrust Bearing: Hardened steel ball bearing for smooth operation

41.10 Applications:
- 41.10.1 Machining fixtures
- 41.10.2 Toolmaking and die work
- 41.10.3 Quality inspection and measurement
- 41.10.4 Assembly and fabrication work
- 41.10.5 Welding jigs
- 41.10.6 Precision machining operations

42 Clamp: Toolmaker, 75 mm

42.1 Basic Indicative Diagram

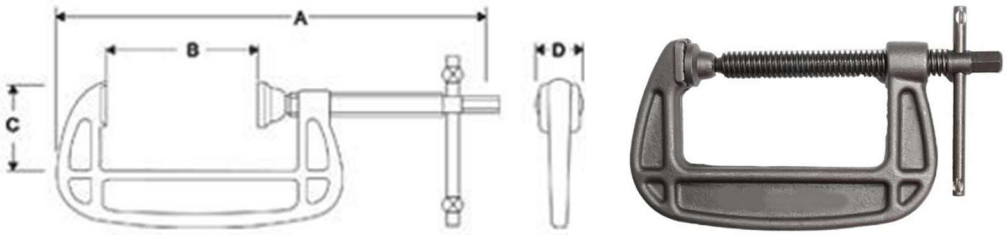
42.2 Maximum Jaw Opening: 75 mm
42.3 Throat Depth: 60 mm
42.4 Overall Length: 180 mm
42.5 Overall Height: 85 mm
42.6 Weight: 1.5 kg
42.7 Material and Construction:
- 42.7.1 Material: High-grade cast iron with stress-relieved structure
- 42.7.2 Finish: Black oxide coating for corrosion resistance
- 42.7.3 Machined Surfaces: Ground to achieve flatness within 0.02mm

42.8 Jaw Specifications
- 42.8.1 Fixed Jaw: Integral with body, hardened to 58-62 HRC

42.8.2 Moving Jaw: Hardened steel insert, 58-62 HRC
42.8.3 Jaw Face Parallelism: Within 0.05mm over full opening range
42.9 Screw Mechanism
42.9.1 Thread: Acme thread, precision ground
42.9.2 Material: Alloy steel, hardened and tempered
42.9.3 Handle: Drop-forged steel with knurled grip
42.9.4 Thrust Bearing: Hardened steel ball bearing for smooth operation
42.10 Applications:
42.10.1 Machining fixtures
42.10.2 Toolmaking and die work
42.10.3 Quality inspection and measurement
42.10.4 Assembly and fabrication work
42.10.5 Welding jigs
42.10.6 Precision machining operations

43 Clamp: C, 50 mm

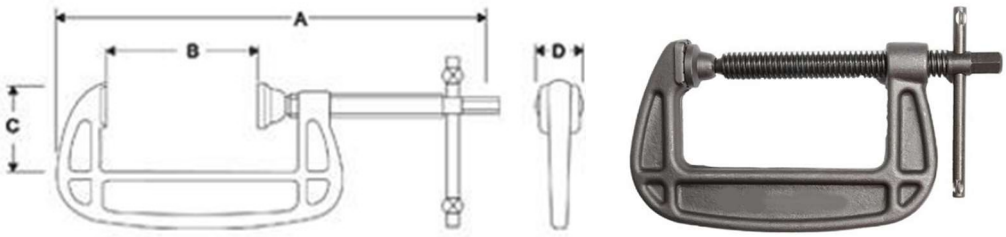
43.1 Basic Indicative Diagram



43.2 Generally conform to I.S 9181 - 1988
43.3 Capacity (B): 50 mm
43.4 Throat Depth (C): 49 mm
43.5 Body hot drop forged from high grade Steel
43.6 All parts fully heat treated and black phosphate for long free trouble service
43.7 Hardness: 27 - 38 HRC
43.8 I - section frame for strength and toughness
43.9 Swivel Head on ball end of operating screw to ensure good grip on angle work pieces
43.10 Acme thread on screw to provide higher, quicker, easier movement for clamping/ unclamping
43.11 Hex Head on screw to facilitate use of spanners for tightening as and when required
43.12 Serrations provided on PAD & C - clamp body for better gripping
43.13 Tension Load Test (Min): 1835 Kg

44 Clamp: C, 100 mm

44.1 Basic Indicative Diagram



44.2 Generally conform to I.S 9181 - 1988

44.3 Capacity (B): 100 mm
44.4 Throat Depth (C): 75 mm
44.5 Body hot drop forged from high grade Steel
44.6 All parts fully heat treated and black phosphate for long free trouble service
44.7 Hardness: 27 - 38 HRC
44.8 I - section frame for strength and toughness
44.9 Swivel Head on ball end of operating screw to ensure good grip on angle work pieces
44.10 Acme thread on screw to provide higher, quicker, easier movement for clamping/ unclamping
44.11 Hex Head on screw to facilitate use of spanners for tightening as and when required
44.12 Serrations provided on PAD & C - clamp body for better gripping
44.13 Tension Load Test (Min): 2510 Kg

45 Scraper Set: 200 mm, Triangular, Half Round and Flat

45.1 Basic Indicative Diagram

45.2 Flat
- 45.2.1 Total Length: 330 mm ± 2 mm
- 45.2.2 Blade Length: 200 mm ± 1 mm
- 45.2.3 Blade Width: 25 mm ± 1 mm

45.3 Half round
- 45.3.1 Total Length: 330 mm ± 2 mm
- 45.3.2 Blade Length: 200 mm ± 1 mm
- 45.3.3 Blade Width: 20 mm ± 1 mm

45.4 Triangular
- 45.4.1 Total Length: 330 mm ± 2 mm
- 45.4.2 Blade Length: 200 mm ± 1 mm
- 45.4.3 Blade Width: 16 mm ± 1 mm

45.5 Blade Material: High Carbon Steel
45.6 Blade Hardness: 55 - 60 HRC

46 Chisel: Diamond Point, 9 mm X 150 mm

46.1 Basic Indicative Diagram

46.2 Size: 9 mm X 150 mm
46.3 Made from high carbon Steel 45#
46.4 Heat treated
46.5 Hardness
- 46.5.1 Cutting Portion: 55 - 57 HRC

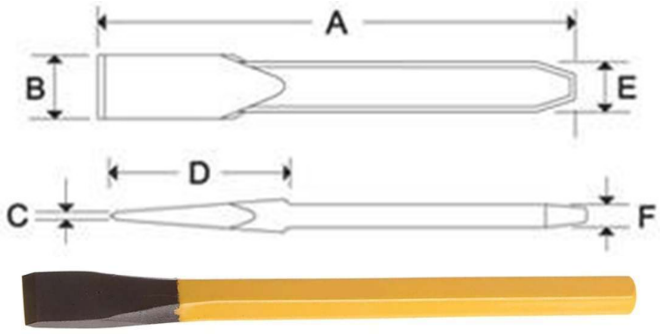
46.5.2 Striking Portion: 35 - 45 HRC

46.6 Spraying Surface

46.7 Hardened and Tempered Edges to Cut Steel and Concrete easily

47 Chisel: Cold, 20 mm X 150 mm

47.1 Basic Indicative Diagram



47.2 Generally Conform to I.S 5663 - 1970

47.3 Dimensions in mm: A: 150, B: 20, C: 3.0, D: 57

47.4 Drop forged from high grade carbon Steel

47.5 Hardness

47.5.1 Cutting Portion: 55 - 57 HRC

47.5.2 Striking Portion: 35 - 45 HRC

47.6 Body should be rounded off for comfortable grip

47.7 Cutting edges should be ground accurately to appropriate angle for cutting

47.8 Should be phosphate & painted to provide anti rusting properties

48 Chisel: Cold, Round Nose, 9 mm X 100 mm

48.1 Basic Indicative Diagram

48.2 Size: 9 mm X 100 mm

48.3 Made from high carbon Steel 45#

48.4 Heat treated

48.5 Hardness

48.5.1 Cutting Portion: 55 - 57 HRC

48.5.2 Striking Portion: 35 - 45HRC

48.6 Spraying Surface

48.7 Hardened and Tempered Edges to Cut Steel and Concrete easily

49 Motorized Tenon Saw

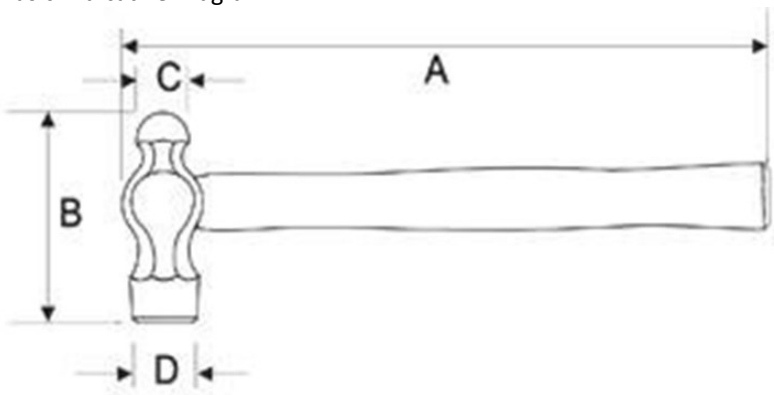
49.1 Basic Indicative Diagram

49.2 Type: Reciprocating Saw

49.3 1300W high-performance motor with Constant Electronic for consistent power suitable for tough applications
49.4 Stroke length: 28 mm to 30 mm
49.5 Stroke rate at no load: 0 - 2,900 spm
49.6 Voltage: 230 V
49.7 Weight: 4 to 5 kg
49.8 Vibration Control system
49.9 Anti-vibration handle and mass balance for low-fatigue working
49.10 Pendulum (orbital) stroke for fast sawing progress
49.11 SDS saw blade changing system for fast, tool-free blade changes
49.12 Constant LED light for illuminating dark work areas
49.13 Tool-free adjustable saw stop
49.14 Metal hook for hanging during work breaks
49.15 Rubber-coated gear housing for secure grip
49.16 Cutting depth in wood: 200-220 mm
49.17 Cutting depth in metal profiles/pipes: 19-20 mm
49.18 Sound pressure level: 100 dB(A); Sound power level: 110 dB(A)
49.19 Vibration emission value (ah): 21 m/s²; Uncertainty K: 1.5 m/s².
49.20 Accessories:
49.20.1 Reciprocating Saw Blade for Metail: 02 Nos.
49.20.2 Reciprocating Saw Blade for Wood: 02 Nos.
49.21 Blow moulded plastic case to securely fit all pieces for easy organization and convenient portability

50 Hammer: Ball Peen, 800 grams with Handle

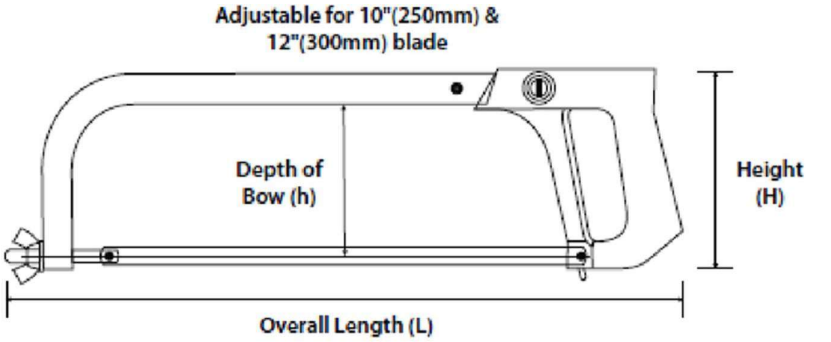
50.1 Basic Indicative Diagram



50.2 Generally conform to I.S. 841 - 1983
50.3 Ball Peen Hammer
50.4 Length: 300 mm + 10%
50.5 Weight: 800 grams
50.6 Drop forged from high grade carbon Steel
50.7 Material: EN - 9
50.8 Partially hardened upto 46 - 56 HRC on striking surface
50.9 Depth of Hardness: 6 mm
50.10 Phosphated and painted
50.11 Handle
50.11.1 Material: Hickory Wood/ Red Wood/ Babul Wood/ Indestructible Handle
50.11.2 Handle fixed firmly to hammer head so that it does not come out after long use

51 Hacksaw Frame: Adjustable, 250 mm to 300 mm

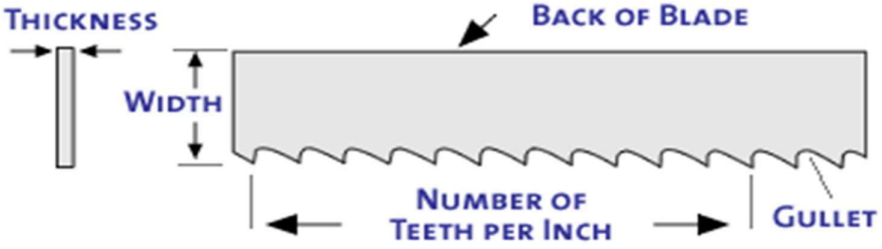
51.1 Basic Indicative Diagram



51.2 Adjustable for 10 inch (250mm) & 12 inch (300mm) blades
51.3 The blade can additionally be set for sawing at 90°
51.4 Storage compartment in the tubular bow should allow for storing spare blades
51.5 Should be Fitted with a 12" (300 mm) Steel hacksaw blade
51.6 Overall Length(L): 430mm ± 10%
51.7 Height(H): 150 mm ± 10%
51.8 Depth of Bow(H): 106mm ± 10%
51.9 Strong Frame
51.10 Should have adjustable tension lever
51.11 Should be able to build 30000 PSI in 12 turns

52 Hacksaw Blade: Length = 300 mm, Width = 12.5 mm, Thickness = 0.63 mm, TPI = 18, Low Alloy, Packet of 100 Blades

52.1 Basic Indicative Diagram

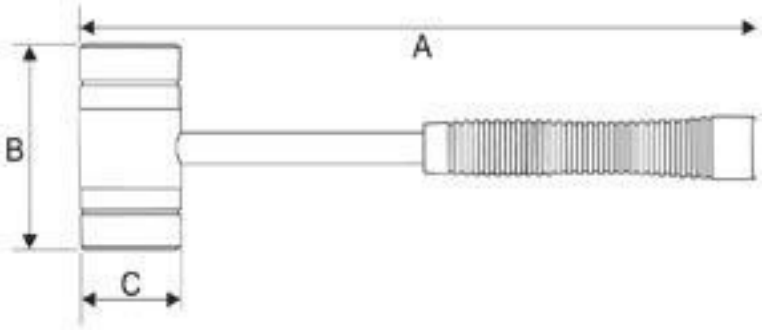


52.2 Compliance: Confirming to IS: 2594
52.3 Length 'L': 300 mm
52.4 Width 'W': 12.5 mm
52.5 Thickness 'T': 0.63 mm
52.6 TPI: 18
52.7 Material: Low alloy steel - 120Cr35 or 110Cr35W2
52.8 Finish: Milling Teeth
52.9 The blades coated with a suitable preservative or paint.
52.10 Packet consisting of 100 Blades.
52.11 Each Blade should comply the above specifications

53 Hammer: Nylon, 30 mm with Handle

53.1 Basic Indicative Diagram

53.2 Generally conform to I.S. 10838 - 1984



53.3 Mallet Diameter: 30 mm

53.4 Mallet should be made of Cellular Acetate Material

53.5 Striking part (Head) should be replaceable

53.6 Handle

53.6.1 Material: Should be made of cold rolled mild Steel pipe and should be chrome plated

53.6.2 Handle should be fitted with rubber grip sleeves.

53.6.3 Handle fitted firmly to hammer head so that it does not come out after long use

54 Precision Screw Driver: Set of 6

54.1 Basic Indicative Diagram

54.2 Blade Hardness: 52 - 55 HRC

54.3 Blades made of High Grade Alloy Steel for extra-long life & High Torque

54.4 Soft material on screw driver's body for better gripping and comfort

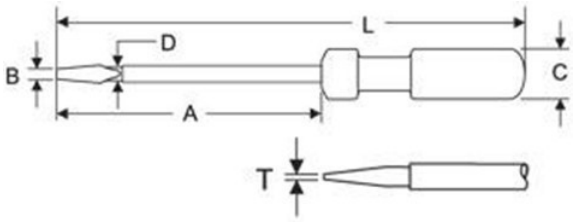
54.5 Black Electro - lacquering finish to protect blades from corrosion

54.6 Flat Tip blades: 1.4 mm, 2.0 mm, 2.4 mm, 3.0 mm,

54.7 Philips Blades: Tip no. 0 and Tip no. 1

55 Screw Driver: Insulated, 10 X 250 mm

55.1 Basic Indicative Diagram



55.2 Generally conform to IS 844 - 1979

55.3 Insulated Blade

55.4 Dimensions:

55.4.1 Size: 10 mm X 250 mm (A - 250 mm, D - 10 mm)

55.4.2 Tip Bit Size: B X T : 10 mm x 1.2 mm

55.5 Blade:

55.5.1 Blade made of high grade Silicon - Manganese Steel (EN 45 A)

55.5.2 Blade should be differentially hardened & tempered to resist wear, bending & meet high torque requirement

55.5.3 Hardness on Tip: 55 - 58 HRC

55.5.4 Minimum Torque Value: 1.46 Kg.m

55.5.5 Bright and Smooth Nickel Chrome plating finish to effectively protect blade against corrosion

55.6 Handle:

55.6.1 Material of Handle: Cellulose Acetate

55.6.2 Handle should be made of high grade CA Plastic, which is non - flammable & unaffected by oil, petrol, grease, water - practically anything

55.6.3 Handle should withstand rough use including hammering

55.6.4 Handle design should be such that it gives comfortable grip even at higher torques

55.6.5 Handle & blade assembly should be insert molded

55.7 Tip:

55.7.1 Tip should be formed by Forging & Trimming

55.7.2 Tip should be precision - ground to 10 degree angle to ensure firm grip in the screw slot.

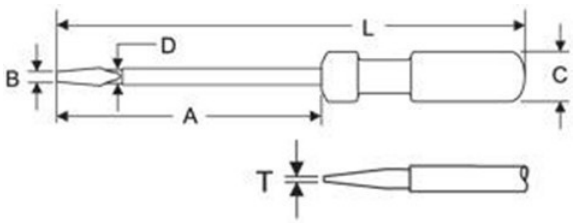
55.7.3 The Blade tip should be magnetized to lift small screw from confined places or to hold the screw in position

55.7.4 Tip sides & faces should be well ground with good finish

55.7.5 Double ear coining should be provided for the blade

56 Screw Driver: Insulated, 4 X 150 mm

56.1 Basic Indicative Diagram



56.2 Generally conform to IS 844 - 1979

56.3 Insulated Blade

56.4 Dimensions:

56.4.1 Size: 4 mm X 150 mm (A - 150 mm, D - 4 mm)
56.4.2 Tip Bit Size: B X T : 4 mm X 0.6 mm

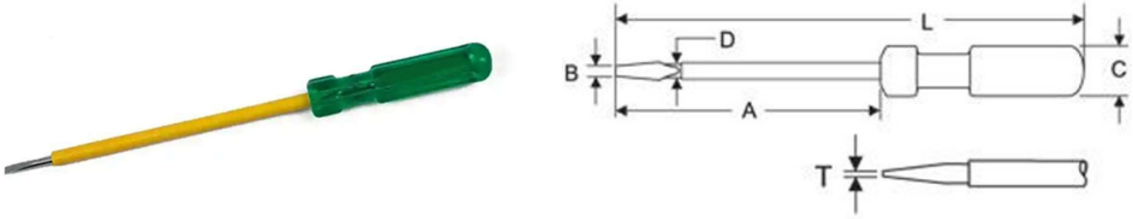
56.5 Blade:
56.5.1 Blade made of high grade Silicon - Manganese Steel (EN 45 A)
56.5.2 Blade should be differentially hardened & tempered to resist wear, bending & meet high torque requirement
56.5.3 Hardness on Tip: 55 - 58 HRC
56.5.4 Minimum Torque Value: 0.15 Kg.m
56.5.5 Bright and Smooth Nickel Chrome plating finish to effectively protect blade against corrosion

56.6 Handle:
56.6.1 Material of Handle: Cellulose Acetate
56.6.2 Handle should be made of high grade CA Plastic, which is non - flammable & unaffected by oil, petrol, grease, water - practically anything
56.6.3 Handle should withstand rough use including hammering
56.6.4 Handle design should be such that it gives comfortable grip even at higher torques
56.6.5 Handle & blade assembly should be insert molded

56.7 Tip:
56.7.1 Tip should be formed by Forging & Trimming
56.7.2 Tip should be precision - ground to 10 degree angle to ensure firm grip in the screw slot.
56.7.3 The Blade tip should be magnetized to lift small screw from confined places or to hold the screw in position
56.7.4 Tip sides & faces should be well ground with good finish
56.7.5 Double ear coining should be provided for the blade

57 Screw Driver: Insulated, 6 X 150 mm

57.1 Basic Indicative Diagram



57.2 Generally conform to IS 844 - 1979
57.3 Insulated Blade
57.4 Dimensions:
57.4.1 Size: 6 mm X 150 mm (A - 150 mm, D - 6 mm)
57.4.2 Tip Bit Size: B X T : 6 X 0.8 mm

57.5 Blade:
57.5.1 Blade made of high grade Silicon - Manganese Steel (EN 45 A)
57.5.2 Blade should be differentially hardened & tempered to resist wear, bending & meet high torque requirement
57.5.3 Hardness on Tip: 55 - 58 HRC
57.5.4 Minimum Torque Value: 0.39 Kg.m
57.5.5 Bright and Smooth Nickel Chrome plating finish to effectively protect blade against corrosion

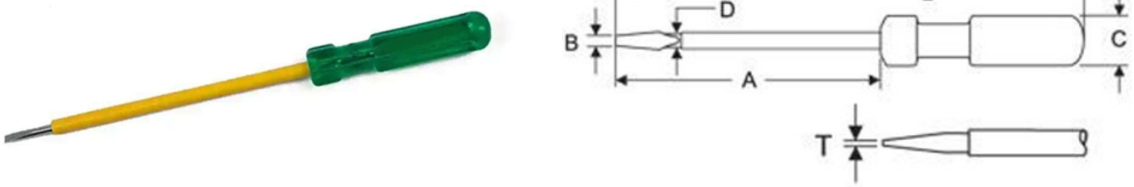
57.6 Handle:

57.6.1 Material of Handle: Cellulose Acetate
57.6.2 Handle should be made of high grade CA Plastic, which is non - flammable & unaffected by oil, petrol, grease, water - practically anything
57.6.3 Handle should withstand rough use including hammering
57.6.4 Handle design should be such that it gives comfortable grip even at higher torques
57.6.5 Handle & blade assembly should be insert moulded

57.7 Tip:
57.7.1 Tip should be formed by Forging & Trimming
57.7.2 Tip should be precision - ground to 10 degree angle to ensure firm grip in the screw slot.
57.7.3 The Blade tip should be magnetized to lift small screw from confined places or to hold the screw in position
57.7.4 Tip sides & faces should be well ground with good finish
57.7.5 Double ear coining should be provided for the blade

58 Screw Driver: Insulated, 8 X 200 mm

58.1 Basic Indicative Diagram



58.2 Generally conform to IS 844 - 1979
58.3 Insulated Blade
58.4 Dimensions:
58.4.1 Size: 8 mm X 200 mm (A - 200 mm, D - 8 mm)
58.4.2 Tip Bit Size: B X T : 8.0 mm X 1.2 mm

58.5 Blade:
58.5.1 Blade made of high grade Silicon - Manganese Steel (EN 45 A)
58.5.2 Blade should be differentially hardened & tempered to resist wear, bending & meet high torque requirement
58.5.3 Hardness on Tip: 55 - 58 HRC
58.5.4 Minimum Torque Value: 1.17 Kg.m
58.5.5 Bright and Smooth Nickel Chrome plating finish to effectively protect blade against corrosion

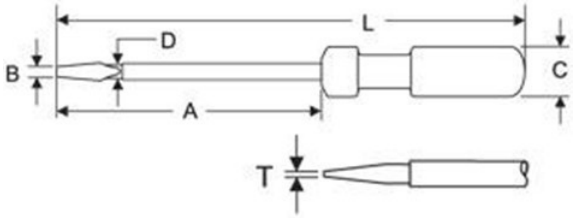
58.6 Handle:
58.6.1 Material of Handle: Cellulose Acetate
58.6.2 Handle should be made of high grade CA Plastic, which is non - flammable & unaffected by oil, petrol, grease, water - practically anything
58.6.3 Handle should withstand rough use including hammering
58.6.4 Handle design should be such that it gives comfortable grip even at higher torques
58.6.5 Handle & blade assembly should be insert molded

58.7 Tip:
58.7.1 Tip should be formed by Forging & Trimming
58.7.2 Tip should be precision - ground to 10 degree angle to ensure firm grip in the screw slot.

58.7.3 The Blade tip should be magnetized to lift small screw from confined places or to hold the screw in position
58.7.4 Tip sides & faces should be well ground with good finish
58.7.5 Double ear coining should be provided for the blade.

59 Screw Driver: Insulated, 8 X 300 mm

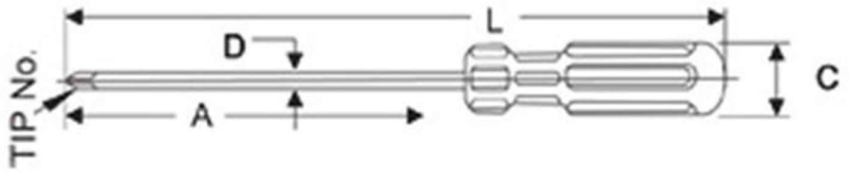
59.1 Basic Indicative Diagram



59.2 Generally conform to IS 844 - 1979
59.3 Insulated Blade
59.4 Dimensions:
59.4.1 Size: 8 mm X 300 mm (A - 300 mm, D - 8 mm)
59.4.2 Tip Bit Size: B X T : 8.0 mm X 1.2 mm
59.5 Blade:
59.5.1 Blade made of high grade Silicon - Manganese Steel (EN 45 A)
59.5.2 Blade should be differentially hardened & tempered to resist wear, bending & meet high torque requirement
59.5.3 Hardness on Tip: 55 - 58 HRC
59.5.4 Minimum Torque Value: 1.17 Kg.m
59.5.5 Bright and Smooth Nickel Chrome plating finish to effectively protect blade against corrosion
59.6 Handle:
59.6.1 Material of Handle: Cellulose Acetate
59.6.2 Handle should be made of high grade CA Plastic, which is non - flammable & unaffected by oil, petrol, grease, water - practically anything
59.6.3 Handle should withstand rough use including hammering
59.6.4 Handle design should be such that it gives comfortable grip even at higher torques
59.6.5 Handle & blade assembly should be insert moulded
59.7 Tip:
59.7.1 Tip should be formed by Forging & Trimming
59.7.2 Tip should be precision - ground to 10 degree angle to ensure firm grip in the screw slot.
59.7.3 The Blade tip should be magnetized to lift small screw from confined places or to hold the screw in position
59.7.4 Tip sides & faces should be well ground with good finish
59.7.5 Double ear coining should be provided for the blade.

60 Screw Driver: Philips, Set of 5

60.1 Basic Indicative Diagram



60.2 Generally conform to IS 844 - 1979

60.3 Sizes:

60.3.1	A: 50 mm	D: 3 mm	TIP SIZE: 00
60.3.2	A: 60 mm	D: 3 mm	TIP SIZE: 0
60.3.3	A: 75 mm	D: 3 mm	TIP SIZE: 1
60.3.4	A: 100 mm	D: 6 mm	TIP SIZE: 2
60.3.5	A: 200 mm	D: 8 mm	TIP SIZE: 3

60.4 Blade made of High Grade Silicon - Manganese Steel

60.5 Blade should be differentially hardened & tempered to resist wear, bending & meet high torque requirement

60.6 Hardness on Tip: 55 - 58 HRC

60.7 The Blade tip should be magnetized to lift small screw from confined places or to hold the screw in position

60.8 Bright and Smooth Nickel Chrome plating finish to effectively protect blade against corrosion

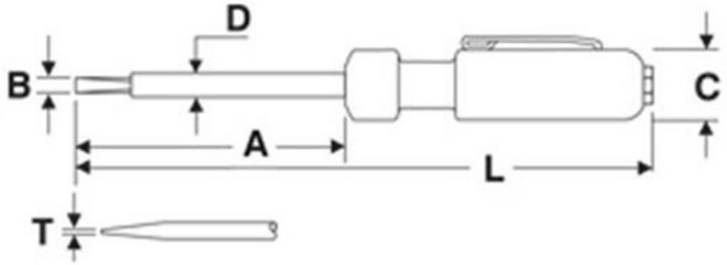
60.9 Handle should be made of high grade CA Plastic, which is non - flammable & unaffected by oil, petrol, grease, water - practically anything

60.10 Handle should withstand rough use including hammering

60.11 Handle design should be such that it gives comfortable grip even at higher torques

61 Neon Tester: 500 V

61.1 Basic Indicative Diagram



61.2 Generally conforming to IS 5579 - 1985

61.3 Dimension

61.3.1	A:	60 mm
61.3.2	D:	6 mm
61.3.3	Tip Size:	B X T = 3.5 mm X 0.5 mm

61.4 Minimum Torque Value: 0.09 Kg.m

61.5 Generally conform to IS 5579 - 1985

61.6 Blade made of high grade Silicon - Manganese Steel (EN - 45A)

61.7 Blade should be differentially hardened & tempered to resist wear, bending & meet high torque requirement

61.8 Hardness on Tip: 55 - 57 HRC

61.9 Bright and Smooth Nickel Chrome plating finish to effectively protect blade against corrosion

61.10 Handle should be made of high grade CA Plastic, which is non - flammable & unaffected by oil, petrol, grease, water - practically anything

61.11 Suitable for checking at minimum 90 V DC and 60 AC voltage and maximum upto 500 V AC
61.12 Blade is provided with PVC insulation sleeve & resistance having 1 mega ohm for preventing the electric shock
61.13 NEON filled glow lamp should give a visible glow in normal day light
61.14 Maximum leakage current of 0.12 microampere ensures safe & shock free in use.
61.15 Tip should be precision - ground to 5 degree angle to ensure firm grip in the screw slot.

62 Portable Electric Impact Drill Machine

62.1 Basic Indicative Diagram:

62.2 Drilling machine should generally conforming to IS 36501 - 1981.
62.3 Power input: 600 Watt (Min.)
62.4 Drilling diameter:
- 62.4.1 Concrete: 13 mm
- 62.4.2 Steel: 10 mm
- 62.4.3 Wood: 25 mm

62.5 No load speed: 0 - 2800 rpm
62.6 Impact rate: 25000 bpm
62.7 Should have soft in line grip for a secure hold
62.8 Should have Rotating brush plate for constant power in reverse and forward rotation
62.9 Should have Forward / Reverse rotation for inserting and removing screws
62.10 Should be able to have Easy and precise control of the RPM - variable speed
62.11 Should have double insulation - shock proof fiber body
62.12 Dimensions:
- 62.12.1 Overall Length in mm (± 10 %): 275 mm
- 62.12.2 Overall Height in mm (± 10 %): 180 mm
- 62.12.3 Net Weight (without cable & blade) (± 10%.): 1.7 kg

62.13 Protection Class: Double Insulation
62.14 Standard Accessories
- 62.14.1 Auxiliary handle = 01 no
- 62.14.2 Blow molded plastic case to securely fit all pieces for easy organization and convenient portability = 01 no
- 62.14.3 Depth gauge = 01 no
- 62.14.4 Spirit level (225 mm) with 3 spirit bulbs (for horizontal, vertical & angular level testing) = 01 no
- 62.14.5 Knife (Length - 150 mm, Blade width 15 mm) = 01 no
- 62.14.6 Claw Hammer (Weight 340 grams) = 01 no
- 62.14.7 Adjustable Wrench (Length 150 mm, Maximum jaw opening 19 mm) = 01 no
- 62.14.8 Combination Plier (Length 160 mm, Maximum jaw opening 25 mm) = 01 no
- 62.14.9 Measuring tape (Length 3 meter, 11 mm tape width) = 01 no
- 62.14.10 Drill bits

- Masonry: 05 no
- Wood: 04 no
- HSS: 05 no

62.14.11 CRV Bit: 10 no
62.14.12 Magnetic Bit Holder: 01 no
62.14.13 Socket: 07 no

62.14.14 Socket Adaptor: 01 no
62.14.15 Assorted Screws: 30 no
62.14.16 Assorted Plastic Plugs: 30 no

63 Metal Cut-Off Circular Saw: Floor Standing

63.1 Basic Indicative Diagram

63.2 Purpose: Metal Cut-Off Circular Saw used for cutting ferrous and non-ferrous metals in manufacturing, fabrication, and maintenance applications
63.3 Type: Floor standing circular saw
63.4 Generally confirming to IS:4665 (Part 2) - 1984
63.5 Blade Diameter: 355 mm
63.6 Power Input (Full Load): 2300 Watts
63.7 Motor Type: Heavy-duty induction motor with thermal overload protection
63.8 No Load Speed: 3800 RPM
63.9 Speed at maximum load: 1500 RPM
63.10 Cutting Capacity: 355 mm
63.11 Saw blade bore: 25.4 mm
63.12 Frame Construction:
63.12.1 Material: Welded steel frame with minimum 1/4" (6mm) plate thickness
63.12.2 Base Design: Vibration-dampening base with leveling feet
63.12.3 Weight Distribution: Low center of gravity for stability
63.12.4 Finish: Powder-coated or painted finish with corrosion resistance
63.13 Cutting Head Assembly
63.13.1 Pivot Mechanism: Heavy-duty pivot with sealed ball bearings
63.13.2 Blade Guard: Full enclosure with quick-release mechanism
63.13.3 Spindle: Hardened and ground steel spindle with precision bearings
63.13.4 Blade Tensioning: Tool-free blade changing system
63.14 Workpiece Clamping
63.14.1 Vise System: Quick-action vise with minimum 6" (150 mm) jaw width
63.14.2 Material: Hardened steel jaws with replaceable face plates
63.14.3 Angle Cutting: Adjustable vise for miter cuts (0° to 45°)
63.15 Safety Requirements
63.15.1 Emergency Stop: Large, easily accessible emergency stop button
63.15.2 Blade Guard: Automatic retraction guard that covers blade when not in use
63.15.3 Spark Containment: Enclosed cutting chamber with spark deflection
63.15.4 Electrical Safety: GFCI protection and proper grounding
63.16 Features:
63.16.1 High wattage for heavy-duty applications
63.16.2 Double insulated for safety

63.16.3 Availability of depth adjustment lever
63.16.4 Rubberized wrap around saw
63.16.5 Shaft lock to avoid blade damage
63.16.6 15 A three core electrical cord 5 meter length with three pin plug

63.17 Cut-off Wheel: 2 Nos.
63.17.1 Diameter: 355 mm
63.17.2 Arbor Hole Size: 25.4 mm
63.17.3 Thickness: 2.8 mm
63.17.4 Material: Mild Steel
63.17.5 Colour: Brown
63.17.6 Abrasive Type: Aluminium Oxide

64 Portable Electric Hand Grinder: Straight

64.1 Basic Indicative Diagram

64.2 Purpose: Portable Electric Hand Grinder: Straight is used for precision grinding, fine deburring, polishing, buffing, derusting, engraving, and detailed finishing operations in workshops, laboratories, jewelry making, model building, and light industrial applications.
64.3 Type: Straight Type corded Hand Grinder
64.4 Generally conforming to IS:4665 (Part 2) - 1984
64.5 Grinding Wheel Capacity
64.5.1 Diameter: 100 mm
64.5.2 Width: 20 mm
64.5.3 Bore: 12.7 mm
64.6 Input Power (Full Load): 500 Watts
64.7 No Load Speed: 5000 RPM
64.8 Construction
64.8.1 Body Material: Sturdy metal/ Al-die cast body
64.8.2 Wall Thickness: minimum 2.5 mm
64.8.3 Surface Treatment: Type II anodizing, clear finish, 0.0002" minimum thickness
64.8.4 Heat Dissipation: Integral cooling fins with 12% surface area increase
64.8.5 Vibration Dampening: Rubber isolation mounts for motor assembly
64.8.6 Spindle Material: Alloy steel, through-hardened to 60-62 HRC
64.8.7 Bearing System: Deep groove ball bearing
64.9 Duty Cycle: 30 minutes
64.10 Power Source: Corded electric
64.11 Motor Type: Universal motor with carbon brush commutation
64.12 Insulation Class: Class F (155°C temperature rating)
64.13 Ergonomic Design
64.13.1 Grip Surface: Anti-slip textured finish with 0.5 mm texture depth
64.13.2 Finger Grooves: Molded finger grooves for secure grip

64.13.3 Hand Compatibility: Ambidextrous design for left/ right hand operation
64.13.4 Comfort Features: Rounded edges with 2 mm minimum radius

65 Portable Electric Air Blower

65.1 Basic Indicative Diagram

65.2 Purpose: Portable Electric Air Blower is used for general purpose cleaning with blowing air al air movement.
65.3 Type: Portable handheld electric air blower
65.4 Generally conforming to IS 302-2-30:2007
65.5 Rated Input Power: 700 W
65.6 Voltage: 230 V
65.7 No-load Speed: 16,000 rpm
65.8 Volumetric Flow Rate: 4.5 m^3/min
65.9 Power Source: AC (corded)
65.10 Construction
65.10.1 Main Body: High-impact ABS plastic or reinforced polypropylene
65.10.2 Fan Housing: Aluminum alloy or high-strength composite
65.10.3 Intake Grill: Metal mesh or reinforced plastic with debris guard
65.10.4 Nozzle: High-density polyethylene (HDPE) or aluminum
65.10.5 Compact and lightweight for easy handling and reduced fatigue
65.11 Fan Specifications
65.11.1 Fan Type: Centrifugal
65.11.2 Fan Diameter: 10-15 cm)
65.11.3 Number of Blades: 6-12 curved blades
65.11.4 Material: Reinforced plastic or aluminum alloy
65.11.5 Balancing: Dynamically balanced for vibration reduction
65.12 Speed Control
65.12.1 Control Type: Variable speed trigger
65.12.2 Lock-on Feature: Cruise control lock for continuous operation
65.12.3 Soft Start: Gradual acceleration to reduce startup surge
65.13 Electrical Safety
65.13.1 Insulation Class: Class II double insulation
65.13.2 Ground Fault Protection: GFCI compatible
65.13.3 Thermal Protection: Automatic motor shutdown at 85°C ± 5°C
65.13.4 Current Limiting: Electronic current limitation circuit
65.14 Mechanical Safety
65.14.1 Intake Guard: Prevents foreign object ingestion
65.14.2 Non-slip Grip: Textured surfaces on all handles
65.14.3 Debris Shield: Protects user from blown debris
65.14.4 Emergency Stop: Instant trigger release stops operation
65.15 Accessories
65.15.1 Round Nozzle: General purpose air direction
65.15.2 Flat Nozzle: Concentrated airflow for precise cleaning

66 Portable Electric Jigsaw

66.1 Basic Indicative Diagram:

66.2 Generally Conforming to IS 36501-1981
66.3 Power input: 570 Watt (Min.)
66.4 Stroke height: 26 mm
66.5 No load stroke rate: 500 - 3100 rpm
66.6 Cutting Depth
- 66.6.1 Wood: 85 mm
- 66.6.2 Aluminum: 20 mm
- 66.6.3 Non-alloy steel: 10 mm

66.7 Should have Adjustable saw blade pendulum action
66.8 Should have Fast tool-free changing of application tools
66.9 Should have Speed preselection for adjusting to suit any application
66.10 Should have Saw dust blower can be switched on / off
66.11 Should have Fiber body - shock proof - double insulation
66.12 Dimensions:
- 66.12.1 Overall Length in mm (± 10 %): 270 mm
- 66.12.2 Overall Height in mm (± 10 %): 200 mm
- 66.12.3 Net Weight (without cable & blade) (± 10%.): 2.5 kg

66.13 Jigsaw Blades for Following Material & Other Accessories:
- 66.13.1 Wood & laminates: 10 pcs
- 66.13.2 Aluminum: 5 pcs
- 66.13.3 Mild steel: 5 pcs
- 66.13.4 Acrylic: 2 pcs
- 66.13.5 Sandwich material: 2 pcs
- 66.13.6 Fiber glass: 2 pcs
- 66.13.7 Stainless steel: 2 pcs
- 66.13.8 Parallel guide with circle cutter: 1 pc

66.14 Standard Accessories:
- 66.14.1 Carrying case
- 66.14.2 Anti-splinter guard
- 66.14.3 3 jig saw blades

67 Portable Electric Random Orbital Sander

67.1 Basic Indicative Diagram:

67.2 Generally conform to IS 36501 - 1981.
67.3 Power input: 340 Watt (Min.)
67.4 Sanding Plate diameter: 150 mm
67.5 Oscillating Circuit diameter: 4 mm
67.6 No load speed: 5000 - 11500 rpm
67.7 Velcro type fastening
67.8 Should have Vibration damping system
67.9 Should have Speed pre-selection
67.10 Should have Greaseless friction brake for quick stops and full work efficiency
67.11 Exchangeable pad diameter: 150 mm diameter & 125 mm diameter
67.12 Fiber body - shock proof - double insulation
67.13 Dimensions:
- 67.13.1 Overall Length in mm (± 10%): 410 mm
- 67.13.2 Overall Height in mm (± 10%): 200 mm
- 67.13.3 Net Weight (without cable & blade) (± 10%): 2.5 kg

67.14 Protection Class - Double Insulation
67.15 Standard Accessories:
- 67.15.1 Auxiliary handle
- 67.15.2 Dust box
- 67.15.3 150 mm Sanding Pad: 05 no
- 67.15.4 125 mm Sanding Pad: 05 no

68 Torque Wrench: Digital, 20 Nm to 280 Nm

68.1 Basic Indicative Diagram

68.2 The torque wrench must be of digital display type for precise torque measurement.
68.3 It must be suitable for use in automotive and machinery industries for bolt fastening and control.
68.4 The device should support both clockwise and counterclockwise operations.
68.5 Digital torsional readings must be provided.
68.6 Minimum Resolution: 0.1
68.7 Maximum Operating Range: 340 Nm/ 250 ft.lb
68.8 Square Drive: 1/2 inch

68.9 Measured Torque Range: 20 to 280 Nm
68.10 Length: 650 to 700 mm
68.11 Ratchet Head Type: Double-side ratchet head
68.12 Number of Ratchet Gear: 36
68.13 Number of Buttons: 5
68.14 Operating Temperature: -10°C to 60°C
68.15 Storage Temperature: -20°C to 70°C
68.16 Humidity: No condensation, 90%
68.17 Drop Test Height: 1 meter
68.18 Vibration Test: 10G
68.19 Lifetime Test: 10,000 times
68.20 Accuracy requirements:
- 68.20.1 ±2% of reading (in the range of 20~100% of full scale) in clockwise direction.
- 68.20.2 ±2.5% of reading in counterclockwise direction.

68.21 The wrench should allow:
- 68.21.1 Torque setting
- 68.21.2 Time setting
- 68.21.3 Mode setting (Peak hold and Real-time)
- 68.21.4 User calibration

68.22 Should have both peak hold and real-time mode selection.
68.23 Buzzer and LED indication to alert the user upon reaching preset torque value.
68.24 Should support auto-shutdown feature (device should power down automatically within 5 minutes of inactivity).
68.25 Capable of displaying torque in at least four units: ft-lb, in-lb, N-m, kgf.cm
68.26 Should be able to store up to 100 records.
68.27 Should provide data output/communication function for record transfer.
68.28 Should also allow data clearance as needed.
68.29 Device should have clear safety instructions and be safe for routine industrial use.
68.30 Should have User Calibration function for periodic recalibration.
68.31 Accessories:
- 68.31.1 5V battery X 2
- 68.31.2 Battery cover key
- 68.31.3 User manual
- 68.31.4 Carrying case

68.32 Blow moulded plastic case to securely fit all pieces for easy organization and convenient portability.

69 Lifting Tackle/ Sling: 1 Ton, 2 meters

69.1 Basic Indicative Diagram

69.2 Generally confirming to IS-15041-2001, BS EN 1492-1-2000.

69.3 Product Type: Textile Lifting Sling
69.4 Working Load Limit: 1000 Kg (1 Ton)
69.5 Length: 2000 mm (2 meters) ± 25 mm
69.6 Width: 50 mm ± 2 mm
69.7 Thickness: 8 mm ± 1 mm
69.8 Eye Length: 150 mm minimum each end
69.9 Eye Width: 50 mm minimum
69.10 Safety Factor: 7:1 minimum
69.11 Breaking Load: 7000 kg minimum
69.12 Temperature Range: -20°C to +100°C
69.13 Material Specifications
- 69.13.1 Webbing Material: 100% Polyester (PES) High Tenacity Yarn
- 69.13.2 Core Material: Polyester multifilament yarn
- 69.13.3 Cover Material: Polyester woven protective sleeve
- 69.13.4 Color Coding: Purple indicating 1 ton capacity as per EN 1492-1)
- 69.13.5 UV Resistance: Stabilized against UV degradation
- 69.13.6 Chemical Resistance: Resistance to oils, greases and most chemicals

69.14 Edge Finish: Reinforced sewn edges with doubled material
69.15 Stitching: High-strength polyester thread, minimum 3 rows of stitching

70 Air Impact Wrench with Impact Sockets

70.1 Basic Indicative Diagram

70.2 ½ Inch Sq. drive Impact Wrench,
70.3 Handle Housing Material: Aluminum, Front case material: Steel
70.4 Max. Torque-745 Nm (@15s)
70.5 Air Inlet ¼ inch , Net Weight 2.3 kg max (± 10%)
70.6 Air consumption 4 CFM max.
70.7 Twin hammer mechanism with front Exhaust
70.8 3 speed position control to adjust tool speed
70.9 ½ Inch 14 Piece Cr Mo impact socket set: 10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, 18mm, 19mm, 21mm, 22mm, 24mm
70.10 Impact sockets in Blow Mould Case
70.11 Hardness of Impact sockets 38 - 55 HRC with Super Grip Profile
70.12 Black Oxide Finish
70.13 Torque: 1.5X ANSI/1.3X DIN
70.14 Brand and Size etched on each individual socket to ensure quick and convenient identification
70.15 ½ Inch (F) to 3/8 inch (M) impact reducer adaptor with same material construction as of impact sockets.

71 Laser Light Pen: Green

71.1 Basic Indicative Diagram

71.2 Purpose: Laser Light Pen is used for presentations, educational use and professional applications requiring precise point indication and visual guidance.

71.3 Type: Handheld laser pointer pen

71.4 Laser Parameters

- 71.4.1 Laser Type: Semiconductor Diode Laser
- 71.4.2 Green: 532 nm
- 71.4.3 Beam Diameter: 1-2 mm at aperture
- 71.4.4 Indoor: 50 meters (depending on ambient light)

71.5 Power Supply

- 71.5.1 AAA batteries required: 2 Nos.

71.6 Dimensions and Weight

- 71.6.1 Length: 120-160 mm
- 71.6.2 Diameter: 12-16 mm
- 71.6.3 Weight: 25-60 grams including batteries
- 71.6.4 Form Factor: Pen-style cylindrical design with pocket clip
- 71.6.5 Textured surface for secure handling

71.7 Material

- 71.7.1 Aluminum alloy (anodized finish)

72 Surface Plate: Cast Iron, 600 x 600 mm with Stand and Cover

72.1 Basic Indicative Diagram

72.2 Total Length: 600 mm ± 1 mm

72.3 Total Width: 600 mm ± 1 mm

72.4 Total Height: 700 mm ± 0.5 mm

72.5 Plate Thickness: 40 mm ± 0.2 mm

72.6 Surface Plate Material: Cast Iron

72.7 Surface Finish: Precision Lapped Finish.

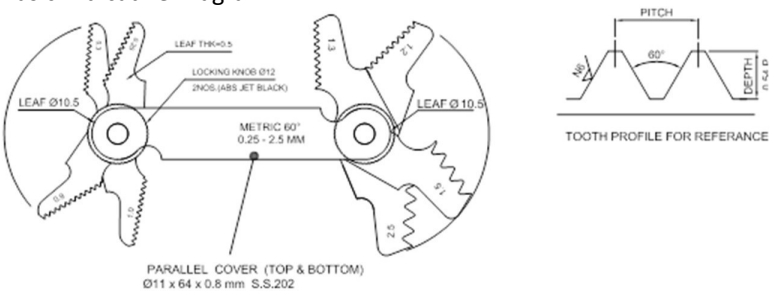
72.8 Uniformity in Hardness, Low Porosity, Non Magnetic, Easy To Clean, Rust Proof, Non - corrosive

72.9 Should be useful for measuring area flatness.

72.10 Suitable plywood cover should provided

73 Screw Pitch Gauge Set: Metric and British, 0.25 to 6 mm, 21 Leaves

73.1 Basic Indicative Diagram



73.2 Material: Carbon Steel

73.3 Range: 21 Leaves 4 - 80 TPI (55°) and Metric 60°

73.4 Finish: Polished

73.5 Should be supplied in Wooden / Plastic Box with proper cushioning

74 Laser Distance Measuring Instrument

74.1 Basic Indicative Diagram

74.2 Purpose: Laser distance measurement instrument is used for construction, surveying and industrial applications requiring precise distance measurement and levelling capabilities.

74.3 Measurement Units: Millimeter, Centimeter, Meter, Feet and Inch

74.4 Distance Range: 0.05 meters to 50 meters

74.5 Measuring Accuracy: ± 1.5 mm

74.6 Levelling Accuracy (Vial): ± 0.2 degree

74.7 Resolution: 0.1 mm

74.8 Laser Class: Class II, <1mW

74.9 Laser Wavelength: 620 - 690 nm

74.10 Single Measurement Time: 0.25 seconds per measurement

74.11 Measurement Modes:

- 74.11.1 Single Distance: Basic point-to-point measurement
- 74.11.2 Continuous Measurement: Real-time distance tracking
- 74.11.3 Area Calculation: Automatic area computation (length × width)
- 74.11.4 Volume Calculation: Automatic volume computation (L × W × H)
- 74.11.5 Indirect Measurement: Pythagorean theorem calculations (2 point and 3 point)
- 74.11.6 Min/Max Tracking: Minimum and maximum distance recording
- 74.11.7 Addition/Subtraction: Mathematical operations on measurements

74.12 Construction:

74.12.1 Housing: Impact-resistant PC-ABS plastic
74.12.2 Lens Cover: Optical grade glass with anti-reflective coating
74.12.3 Keypad: Silicone rubber with tactile feedback
74.12.4 Display Window: Tempered glass with anti-glare coating
74.12.5 Laser Aperture: Protected by sliding cover or automatic shutter
74.12.6 Non-slip design, easy to carry, Two bubble levels for alignment, Angle measurement, Add/ Subtract functionality

74.13 Display System
74.13.1 Display Type: Backlit LCD with high contrast
74.13.2 Display Size: 60 mm to 85 mm diagonal
74.13.3 Resolution: 128 X 64 to 240 X 128 pixels
74.13.4 Backlight: LED backlight with auto-off timer
74.13.5 Display Information:

74.14 Distance measurement (large digits)
74.14.1 Measurement units
74.14.2 Battery status
74.14.3 Laser status indicator
74.14.4 Level vial status
74.14.5 Measurement mode indicator
74.14.6 Memory storage count

74.15 Operation Features
74.15.1 Auto Power-Off: 180 seconds of inactivity
74.15.2 Key Lock: Accidental button press prevention
74.15.3 Beeper: Audible confirmation of measurements and errors
74.15.4 Data Hold: Freeze display for reading in difficult positions
74.15.5 Last 20 Measurements: Automatic storage and recall

74.16 Memory and Data Management
74.16.1 Internal Memory: Store up to 50-100 measurements
74.16.2 Measurement History: Time/ date stamp for measurements

74.17 Battery: 2 X 1.5V AAA batteries
74.18 Weight: Approx. 100 g
74.19 Safety Level: CE (EMC)
74.20 Accessories Included:
74.20.1 Protective Carrying Case with foam insert
74.20.2 User Manual
74.20.3 Wrist Strap

75 Palm Scale: Table Top, 1000gm

75.1 Basic Indicative Diagram

75.2 Purpose: Palm Scale is used for precise weighing of small items in various

applications including jewelry, pharmaceuticals, laboratory samples, precious metals and general purpose weighing tasks.

75.3 Type: Table top weighing scale
75.4 Generally confirming to IS:9281 (Part I) - 1979
75.5 Accuracy and Precision
- 75.5.1 Maximum Capacity: 1000 grams
- 75.5.2 Least Count (Readability): 0.1 grams
- 75.5.3 Resolution: 1 part in 5,000 (500g ÷ 0.1g)
- 75.5.4 Accuracy: ±0.1 gram (± 1 least count) from 0-1000g
- 75.5.5 Linearity: ±0.1 gram maximum deviation across full range

75.6 Repeatability: ±0.1 gram (standard deviation ≤0.05g)
75.7 Eccentric Loading Error: ±0.1 gram maximum
75.8 Temperature Coefficient: ±0.0002%/°C (±0.001g/°C)
75.9 Long-term Stability: ±0.1g over 8 hours of continuous operation
75.10 Weighing Units
- 75.10.1 Grams (g) - Default
- 75.10.2 Ounces (oz)
- 75.10.3 Troy ounces (ozt)
- 75.10.4 Pennyweights (dwt)
- 75.10.5 Carats (ct)
- 75.10.6 Grains (gn)
- 75.10.7 Unit Conversion: Automatic real-time conversion between units

75.11 Load Cell Specifications
- 75.11.1 Sensor Type: Strain gauge load cell
- 75.11.2 Load Cell Material: Aluminum alloy or stainless steel
- 75.11.3 Number of Load Points: 4-point load cell design
- 75.11.4 Load Cell Capacity: 1000 gram nominal with 150% safe overload

75.12 Weighing Platform
- 75.12.1 Platform Size: minimum 80 mm X 80 mm
- 75.12.2 Platform Material: Stainless steel grade 304 or ABS plastic
- 75.12.3 Platform Thickness: 2-3mm for rigidity
- 75.12.4 Surface Finish: Brushed stainless steel or textured plastic
- 75.12.5 Overload Protection: Mechanical stops prevent damage beyond 150% capacity

75.13 Construction Materials
- 75.13.1 Housing: High-impact ABS plastic or aluminum alloy
- 75.13.2 Weighing Platform: Stainless steel 304 grade
- 75.13.3 Display Window: Tempered glass or clear polycarbonate
- 75.13.4 Keypad: Silicone rubber with tactile feedback
- 75.13.5 Base: Non-slip rubber feet or pads
- 75.13.6 Vibration isolation feet provided

75.14 Display System
- 75.14.1 Display Type: LCD with LED backlight
- 75.14.2 Display Size: minimum 25 mm X 15 mm
- 75.14.3 Digit Height: 12-15 mm for easy reading
- 75.14.4 Display Resolution: 5-digit numeric display
- 75.14.5 Backlight: LED backlight with auto-off function

75.15 Display Information:
- 75.15.1 Weight value (large digits)
- 75.15.2 Unit indicator
- 75.15.3 Battery status

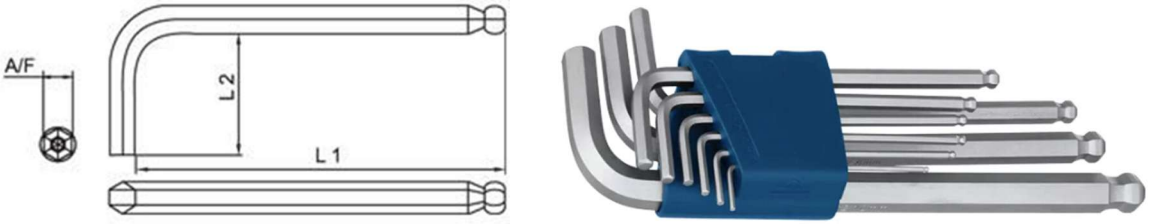
75.15.4 Stable weight indicator
75.15.5 Overload warning
75.15.6 Low battery warning
75.15.7 Internal Memory with last minimum 10 weighing results storage

75.16 Power:
75.16.1 Battery: 2 X 1.5V AAA batteries
75.16.2 Power Button: On/off with auto-power-off
75.16.3 Auto Power-On: Scale activates when item placed on platform
75.16.4 Auto Power-Off: 60-120 seconds of inactivity (user selectable)
75.16.5 Auto Sleep: Enters low power mode after 30 seconds inactivity

75.17 Calibration verification with factory calibration with certified weights

76 Allen Key Set: Hexagonal, 1.5 mm to 10 mm, Set of 9

76.1 Basic Indicative Diagram



76.2 Generally conform to I.S 3082 - 1988 pipe 117.3 Sizes in mm: 1.5, 2, 2.5, 3, 4, 5, 6, 8, 10

76.3 Made from high grade alloy Steel - Chrome Vanadium Molybdenum (S2) which enables 30% higher torque as compared to Allen keys made from Cr - V Steel

76.4 Higher Hardness 57 - 62 HRC

76.5 Ball Head on one side to facilitate tightening & loosening of screws at 15 degree

76.6 Precision drawn and machined

76.7 Specially coated and Oiled for rust prevention

77 Universal Quick Adjustable Multi-function Wrench Spanner Set

77.1 Basic Indicative Diagram

77.2 Set of 2 with range 9mm to 32 mm

77.3 Double ended self-adjusting
77.3.1 Opening: 9 mm to 14 mm
77.3.2 Length: minimum 210 mm

77.4 Single ended self-adjusting
77.4.1 Opening: 9mm to 32 mm
77.4.2 Length: minimum 280 mm

77.5 Wrench Body: High Strength Steel

77.6 Heat Treatment for Hardening and tempering of critical components

77.7 Crome plating and finishing

77.8 Double color Anti Slip Rubber Grip

77.9 Maximum Torque: 150 Nm
77.10 Jaws: minimum 58 HRC
77.11 Operating Temperature: -20°C to +80°C

78 1/2 Inch Socket Set

78.1 Basic Indicative Diagram

78.2 1/2 Inch Ratchet Socket Set, 2 Extension Bar, T - Bar, Universal Joint, Sockets = 8,9,10,11,12, 13,14,15,16,17,18,19,21,22,23,24, 26,27,28, 29,30 and 32 mm, in a Plastic Case Box

78.3 27 Pieces set which Includes 22 Pieces 1/2 inch Sockets: 8, 9, 10, 11, 12, 13, 14, 15, 16, 17,18, 19, 21,

78.4 22, 23, 24, 26, 27, 28, 29, 30, 32 mm, Extension Bar - 5 inch, 10 inch, Universal Joint, Sliding T - Bar, Ratchet Handle

78.5 Cold forging from high quality Chrome Vanadium Steel

78.6 Ultra Premium Finish to provide scratch proof surface with enhanced protection against corrosion. (Mirror Finish & Matt finish not acceptable)

78.7 Should provide a Non slip grip even in slippery applications (Knurled Band)

78.8 48 Teeth Gear Structure Ratchet with quick release push button & Head Should be repairable.

78.9 Universal Joint should be hinged through 180° in both directions

78.10 Profile should provide larger contact area between socket and fastener

78.11 Brand & Size etched on each individual socket to ensure quick & convenient identification

78.12 Blow moulded plastic case to securely fit all pieces for easy organization and convenient portability.

79 Two Post Car Lift: Capacity 4 Ton, Electric Operated

79.1 Basic Indicative Diagram

79.2 Paint: Powder coat mat finish

79.3	Mechanical lock:	Single point lock release
79.4	Arm Lock:	Spring loaded lock
79.5	Arm Design:	Symmetric design
79.6	Post Design:	Symmetric design
79.7	Piston:	Direct drive hydraulic piston for fast and steady operation

79.8 Technical specification

79.8.1	Material:	Mild Steel
79.8.2	Lifting Capacity:	4 Tons
79.8.3	Over all Height:	3500 mm ± 5 %
79.8.4	Over all Width:	3400 mm ± 5 %
79.8.5	Under Bar Clearance:	3300 mm ± 5 %
79.8.6	Inside Column Distance:	2800 mm ± 5 %
79.8.7	Load Distribution: 1:	1
79.8.8	Lifting Time:	< 45 seconds.
79.8.9	Drive through clearance:	2500 mm ± 5 %
79.8.10	Maximum lifting height:	1800 mm ± 5 %
79.8.11	Overall weight:	Min 600 Kg

79.9 Lifting arm adjustment

79.9.1	Max / Min Front:	780 / 1140mm ± 5 %
79.9.2	Max / Min Rear:	780 / 1140mm ± 5 %
79.9.3	Power Supply:	380 V AC, 3 Phase, 50Hz
79.9.4	Motors:	3.0 HP

80 Two Wheeler Scooter Assembly Set

80.1 Basic Indicative Diagram



80.2 Hydraulic 2 Wheeler Ramp

- 80.2.1 Lifting Capacity: 300kg
- 80.2.2 Hydraulic Type
- 80.2.3 Manual Foot Operated
- 80.2.4 Maximum lifting height: 3 Feet
- 80.2.5 Ramp Length: 7 Feet
- 80.2.6 Material: Mild Steel with power coated
- 80.2.7 Scissor Lift
- 80.2.8 Universal adjustable mount to securely hold scooter/ bike

80.3 Includes **Brand New** two real-life electric two-wheelers. One complete operational vehicle and other one with wire harness

80.4 Real-world assembly and integration of electric scooters and bikes

80.5 Hands-on practice with EV component wiring: battery, controller, hub motor, BMS, throttle, lighting, etc.

80.6 Practical understanding of safety protocols, electrical layouts, and assembly procedures

80.7 Modular fixtures for easy mounting/ removal of major components: BLDC hub motor, Minimum Voltage 60V min / Minimum Capacity 38AH Lithium-ion battery pack, Controller unit, Throttle & brake levers, Wiring harness, Headlamp, tail-lamp, and indicators

80.8 Power Supply Unit: Input: 230V AC, Output: 48-72V DC regulated power supply for live component testing

80.9 Integrated Workbench: Built-in tool storage system, Sensor test ports for training diagnostics

80.10 Sensors and Monitoring: Voltage sensor, Current sensor, Motor RPM sensor, Brake activation sensor

80.11 All equipment should be compliant with relevant electrical safety standards

80.12 Display Board:

80.12.1 Display Board for displaying comprehensive electrical wiring diagram for an electric vehicle (EV) two-wheeler. This display will utilize a colour coded scheme to distinctly represent all wiring harnesses. Furthermore, it will clearly illustrate all constituent electrical and electronic components such as the battery management system (BMS), motor controller, DC-DC converter, charging port, throttle, and various sensors along with their respective interconnections within the EV scooter's architecture.

80.12.2 Printed on 400 gsm water proof paper sheet laminated on printed side.

80.12.3 The printed sheet to be placed on 5 mm MDF board with Polystyrene Photo Frame Moulding and fixtures for wall hanging.

80.12.4 The size of the display board approximately 1200 mm X 900 mm

81 Transmission Gearbox Trainer

81.1 Basic Indicative Diagram

81.2 Gear Box for PMSM Motor

81.3 Differential Gear Set

81.4 It should be mounted on a demonstration bench

81.5 Transmission gear box with differential for EV car should be suitably sectioned to show the internal details, the gear box will have gear reduction unit, differential/ tranaxle unit connected to the Motor.

81.6 The Model should explain the connectivity of the motor to the reduction gear unit, and further connection to the Differential unit can be explained.

81.7 Transmission / Gearbox Demo Kit should consist of 320 volt reduction motor kit compatible with a Differential gear.

81.8 Gear Box should be suitable for 320 Volt or more voltage range.

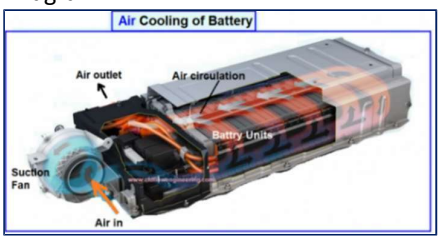
81.9 Includes attachments such as Drive shaft connecting to the Gear Box.

81.10 Multi color cut section diagram printed on frame to better understand the internal construction. Good quality painted structure.

81.11 Setup Size Approx: 1800 mm X 1200 mm X 1200 mm

82 Demonstration Board: Electric Vehicle Cooling System

82.1 Basic Indicative Diagram



82.2 Display Board for:
- 82.2.1 Air Cooling
- 82.2.2 Liquid Cooling
- 82.2.3 Phase Change Material (PCM) Cooling
- 82.2.4 Refrigerant-Based Cooling
- 82.2.5 Heat Pipes
- 82.2.6 Immersion Cooling
- 82.2.7 Thermoelectric Cooling (Peltier Cooling)
- 82.2.8 Hybrid Cooling Systems

82.3 Should have a colorful printed Schematic diagram and Circuit diagram.

82.4 Parts names with explanation should be colour printed on 400 gsm water proof paper sheet laminated on printed side.

82.5 The printed sheet to be placed on 5 mm MDF board with Polystyrene Photo Frame Moulding and fixtures for wall hanging.

82.6 The size of the display board approximately 1200 mm X 900 mm.

83 Mini Commercial Electric Vehicle Chassis

83.1 Basic Indicative Diagram

83.2 The Mini Commercial Vehicle chassis structure will be fitted with Front suspension system with Disc brake system, and rear suspension system with Drum brake system, steering system complete, the chassis structure will also be assembled with EV rear axle and EV motor

83.3 Suitable for training purpose for commercial vehicle

83.4 Brand new chassis of Four-wheeler should be supplied.

83.5 To study the box structure of the Chassis, Ladder frame structure.

83.6 To demonstrate all under chassis component fitment options with color coding.

83.7 Rear Axle Electric Vehicle:
- 83.7.1 Should be made out of New Electric Light Carrier Vehicle (LCV)
- 83.7.2 Should be suitably sectioned to show the action of Differential gear box and Brake drums in Rear axle.

83.7.3 Connectivity of Motor to the Differential gear box to be shown.

83.7.4 The rear axle should be fitted with Electric Vehicle motor duly sectioned to show the internal details.

83.8 Suspension System: Front and Rear:

83.8.1 Cut section model of complete Front Macpherson Suspension Strut with Drive Shaft and Disk Brake.

83.8.2 This model should be made out of original used parts complete front MacPherson suspension strut with disk brake system.

83.8.3 Should be suitably sectioned and arranged to demonstrate the internal construction details showing the minute information With Suspension Strut with spring and shock absorber, disc brake, callipers, etc.,

83.8.4 This model should be made out of original used parts complete leaf spring type rear suspension system.

83.8.5 Should be suitably sectioned and arranged to demonstrate the internal construction details showing the minute information With Suspension with Leaf Spring and axle, wheels mounting, drive shaft, with drum brake etc.

83.9 Steering System:

83.9.1 Cut Section Model of Steering Gear Box (Working) with connections to the disc and drum brake wheels

83.9.2 This model should be made out of full-size original parts

83.9.3 Should be suitably sectioned and to should be able to demonstrate the working of Steering wheel worms, Steering arm, etc.

83.9.4 The Arrangement of Wheels and Axle Connecting to steering system should be done so the movement of the wheels when rotating the steering wheels can be displayed.

83.10 Disc and Drum Brake System:

83.10.1 Hydraulic Braking System with Vacuum Booster and Vacuum Pump.

83.10.2 The model should be made out of original brake aggregates which will be suitably sectioned, Left Front disc and left rear drum will be made working, using necessary hydraulic connection from the Master cylinder, by operating the brake pedal connected to the Master cylinder through booster, the functioning of disc and drum brake can be demonstrated.

83.10.3 The aggregates on the other side will be suitably sectioned to show the internal details and will be kept dummy.

83.10.4 All the aggregates will paint finished the entire setup will be mounted on a sturdy iron frame.

83.10.5 The model should be suitably paint finished.

83.10.6 Different colors should be used for different components for easy identification of different systems and mechanisms.

83.11 All the hardware's and gears should be suitably electroplated

83.12 Display Board:

83.12.1 4 separate Display Board for Rear Axle Electric Vehicle, Suspension System: Front and Rear, Steering System, Disc and Drum Brake System and Electric

83.12.2 Should have a colorful printed Schematic diagram and Circuit diagram.

83.12.3 Parts names with explanation should be colour printed on 400 gsm water proof paper sheet laminated on printed side.

83.12.4 The printed sheet to be placed on 5 mm MDF board with Polystyrene Photo Frame Moulding and fixtures for wall hanging.

83.12.5 The size of the display board approximately 1200 mm X 900 mm

84 Engine and Transmission System for Electric Vehicle

84.1 Basic Indicative Diagram

84.2 Chain Drive with BLDC Model

84.2.1 250Watts with speed controller connected to a bike rear wheel arrangement

84.2.2 Rated Voltage(V): 24V DC

84.2.3 Power(W): 250 W

84.2.4 Speed (RPM): 2650

84.2.5 Rated Speed (RPM): 3200

84.2.6 Rated Current(A): 13.7 Amps

84.2.7 Rated torque: 0.87 Nm

84.2.8 Transmission Chain sprocket (11 teeth, pitch ¼" = 6.35mm),

84.2.9 24V 250W controller

84.2.10 DC MFM Meters with RS485 output: Battery input, Variable DC output and RPM.

84.2.11 Suitable Control Panel along with Work bench

- Workbench dimensions: 1200 mm (L) X 900 mm (W) X 750 mm (H)
- Work area available to the students should will be atleast 8 square feet.
- The entire structure including Panel and workbench should be of MS (Powder Coated) or suitable Aluminium structure (to withstand minimum 50 kg) may be supplied.

84.3 Hub Drive Motor Model

84.3.1 1000 Watts Hub Motor with speed controller Fitted to Two Wheeler rear wheel arrangement

84.3.2 Motor Specifications

- Voltage Rating: 48V DC
- Power Output: 1000W
- Current Rating: Typically 20-25A (check controller specs for confirmation)
- Motor Type: Brushless DC (BLDC) Hub Motor
- RPM Rating: At full voltage: 500-600 RPM (depends on wheel size and load conditions)

84.3.3 Performance Parameters

- Efficiency: Up to 85%

84.3.4 Top Speed:

- With a 26-inch wheel: 45-50 km/h (28-31 mph)

84.3.5 Physical Dimensions

- Motor Diameter: Approx. 205-210 mm
- Axle Dimensions: 12-14 mm (compatible with most standard frames)

84.3.6 Other Specifications

- Weight: Approx. 6-7 kg
- Torque: Peak torque of 40-50 Nm
- Wiring: 3-phase wires + Hall Sensor Wires for precise control
- Cooling: Air-cooled
- 48V 1000W BLDC Motor Controller with 20-25A continuous current, Hall sensor support, low voltage cutoff at 41-42V with reverse function, and PAS compatibility.

84.3.7 DC MFM Meters with RS485 output: Battery input, Variable DC output and RPM

84.3.8 Suitable Control Panel along with Work bench

- Workbench dimensions: 1200 mm (L) X 900 mm (W) X 750 mm (H)
- Work area available to the students should will be atleast 8 square feet.
- The entire structure including Panel and workbench should be of MS (Powder Coated) or suitable Aluminium structure (to withstand minimum 50 kg) may be supplied.

84.4 Belt Drive PMSM Motor Model

84.4.1 2000 Watts PMSM motor with speed controller Fitted to Two Wheeler rear wheel arrangement.

84.4.2 Motor Specifications

- Motor Type: Permanent Magnet Synchronous Motor (PMSM)
- Voltage Rating: 48V DC
- Power Rating: 2000W (2 kW)
- Current Rating:
- Continuous: 40-45A
- Peak: 50-60A
- RPM Range: 2000-4000 RPM
- Top Speed with a 26-inch wheel: 60-70 km/h
- Torque: 70-90 Nm
- Efficiency: Up to 92%
- Cooling: Air-cooled
- Weight: Approx. 10-12 kg

84.4.3 Controller Specifications

- Voltage Rating: 48V DC
- Power Rating: 2000W
- Current Rating:
- Continuous: 40-45A
- Peak: 50-60A
- Low Voltage Cutoff (LVC): 41-42V
- Speed Control: Supports PWM and FOC (Field-Oriented Control) for smooth operation
- Hall Sensor Support: Yes

- Throttle Input: 0-5V signal (twist throttle)
- Reverse Function: Yes

84.4.4 DC MFM Meters with RS485 output: Battery input, Variable DC output and RPM

84.4.5 Suitable Control Panel along with Work bench

- Workbench dimensions: 1200 mm (L) X 900 mm (W) X 750 mm (H)
- Work area available to the students should will be atleast 8 square feet.
- The entire structure including Panel and workbench should be of MS (Powder Coated) or suitable Aluminium structure (to withstand minimum 50 kg) may be supplied.

84.5 BLDC Motor with Differential Gear Model

84.5.1 1800 Watts BLDC motor with speed controller rear axle setup with differential and brakes

84.5.2 Directly mounted on the rear wheel Differential gear hub to study the operation and application of the differential gear system in power train EV application.

84.5.3 Motor Specifications

- Motor Type: Brushless DC (BLDC) Motor with Integrated Rear Axle
- Power Rating: 1800W
- Voltage Rating: 48V DC
- Current Rating:
- Continuous: 35-40A
- Peak: 45-50A
- RPM: 3000-3500 RPM at rated voltage
- Top Speed with standard gear ratio and tires: 40-45 km/h
- Torque: Peak torque of 100-120 Nm (suitable for e-rickshaw loads)
- Efficiency: Up to 85%
- Cooling: Air-cooled
- Weight: Motor and axle assembly approximately 20-25 kg

84.5.4 Controller Specifications

- Voltage Rating: 48V DC
- Power Rating: 1800W
- Current Rating:
- Continuous: 35-40A
- Peak: 45-50A
- Low Voltage Cutoff (LVC): 41-42V
- Speed Control: Supports PWM and torque-based control for smooth operation
- Hall Sensor Support: Yes (for accurate motor operation)
- Throttle Input: 0-5V (twist throttle)
- Reverse Function: Yes (for reversing vehicle direction)

84.5.5 DC MFM Meters with RS485 output: Battery input, Variable DC output and RPM.

84.5.6 Suitable Control Panel along with Work bench

- Workbench dimensions: 1200 mm (L) X 900 mm (W) X 750 mm (H)
- Work area available to the students should will be atleast 8 square feet.
- The entire structure including Panel and workbench should be of MS

(Powder Coated) or suitable Aluminium structure (to withstand minimum 50 kg) may be supplied.

84.6 Battery Specifications

84.6.1 All above systems should be operated using a battery system

84.6.2 The battery must be arranged on to a movable trolley with lockable caster wheels with suitable charger

84.6.3 Battery Specifications:

- Voltage: 48V
- Capacity: 60Ah
- Battery Type: Lithium-ion (preferred) or Lead Acid
- Continuous Discharge Current: 45-60A
- Peak Discharge Current: 70-80A
- Charging Time: 4-6 hours with a 10A charger
- Battery Weight: Approx. 15-20 kg

84.7 Should be able to perform the following practicals

84.7.1 Efficiency Comparison Across Drive Types

84.7.2 Noise and Vibration Analysis

84.7.3 Durability and Wear Testing

84.7.4 Torque Ripple Measurement

84.7.5 Thermal Performance Under Load

84.7.6 Efficiency Mapping for BLDC Hub Motor

84.7.7 Load Distribution in Differential Gear Drive

84.7.8 Transmission Ratio Optimization

84.7.9 Control Strategy Comparison for BLDC Hub Motor

84.8 Display Board:

84.8.1 4 separate Display Board for Chain Drive with BLDC Model, Hub Drive Motor Model, Belt Drive PMSM Motor and BLDC Motor with Differential Gear

84.8.2 Should have a colorful printed Schematic diagram and Circuit diagram.

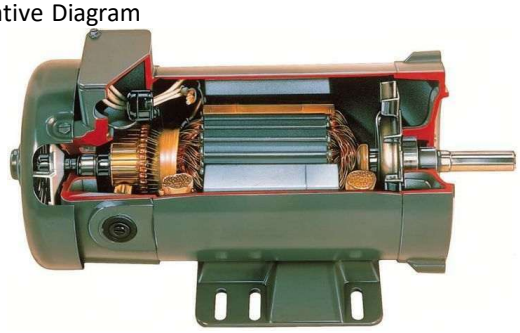
84.8.3 Parts names with explanation should be colour printed on 400 gsm water proof paper sheet laminated on printed side.

84.8.4 The printed sheet to be placed on 5 mm MDF board with Polystyrene Photo Frame Moulding and fixtures for wall hanging.

84.8.5 The size of the display board approximately 1200 mm X 900 mm

85 Cut Section of Electric Vehicle Motors

85.1 Basic Indicative Diagram



85.2 The cut section should be Mounted on a MS Powder coated sturdy stand with proper Nomenclature of the components and colour coding

85.3 All the hardware's and gears should be suitably electroplated

85.4 Cut Section of Motors

85.4.1 BLDC Hub Motor: 1 KW Model
85.4.2 PMSM Motor: 1 KW Model
85.4.3 BLDC Motor: 1 KW Model
85.4.4 PMDC Motor: 750W Model

86 HVAC Trainer

86.1 Basic Indicative Diagram

86.2 Trainer Kit suitable for Training of Air Conditioning System of EV Four Wheeler.

86.3 This model should be made from original parts

86.4 Should be suitably arranged on to a Metal frame with navopan board to demonstrate details of Piping connection, Wiring circuit with all the accessories such as Cooling Coil, compressor with integrated motor, evaporator, necessary hoses, condenser etc.

86.5 The model should be made to work using suitable power supply so that by operating the AC panel the operation and cooling effect of the same can be demonstrated

86.6 The Model have operation of the blower

86.7 The entire system will be suitably painted.

86.8 A colorful printed schematic diagram and circuit diagram with part naming with explanation will be printed on to board and fixed along with the Model

87 Multifunction Installation Tester

87.1 Basic Indicative Diagram

87.2 Ensures electrical safety and compliance by testing circuits, residual current devices, and voltage levels.

87.3 It should detect faults and verify the integrity of electrical installations in EV systems.

87.4 3.5" TFT color LCD display with 320 X 240 pixels

87.5 Fast high current loop test

87.6 Variable RCD current mode for customized settings

87.7 PASS/FAIL indication for RCD tests

87.8 Selection of voltage measurement between L-N, L-PE and N-PE
87.9 Should Support SD memory and USB and Bluetooth interface
87.10 Internal Memory
87.11 Safe Earth Volt Touchpad should detect raised earth voltages > 50 V, indicating potentially dangerous situations.
87.12 Probes with test button for easy, always reliable and accurate compensation of test leads and mains cords
87.13 Bluetooth interface
87.14 EMC & LVD
87.15 Residual Current device Testing: Test current: x½, x1, x2, x5,
87.16 Accuracy: 1.5% ~ -9%
87.17 Measurement Range (V) / AC-DC: 80 ~ 500V / (45 ~ 400Hz)
87.18 Resolution: 1 Volt
87.19 Accuracy: ± (2% of reading + 2 digits)
87.20 Short circuit current: ≥ 200mA
87.21 Compliance: CE, EN: 61326, EN: 61010-1, EN: 61010-02-032, EN: 61010-02-033, CAT IV 400V EN
87.22 Accessories: Test leads, 8 x 1.5V“AAA” batteries, USB cable and Software.
87.23 Blow moulded plastic case to securely fit all pieces for easy organization and convenient portability.

88 Electric Vehicle Service Equipment Test Adapter Kit

88.1 Basic Indicative Diagram

88.2 The Equipment is used for interfacing Electric Vehicle Supply Equipment to test socket of installation tester for verification of electrical safety & functional testing.
88.3 It is used for testing Mode 3 EV supply equipment with type 2 connector.
88.4 The adapter should allow you to conduct tests in combination with appropriate test instruments like an installation tester.
88.5 PE Pre-Test: With this safety feature the PE conductor can be tested for possible presence of dangerous voltage against earth.
88.6 Proximity Pilot (PP) state “Cable Simulation”: With PP State rotary switch the adapter can simulate various current capabilities of charging cables.
88.7 Control Pilot (CP) state “Vehicle Simulation”: With CP State rotary switch selector various
88.8 Charging states can be simulated.
88.9 Simulation of CP error “E”
88.10 Simulation of PE error (Earth fault)
88.11 Simulation of PE error (Earth fault)
88.12 Suitable to vehicle charging stations with charging mode 3
88.13 EV-connectors for type 2 and type 1

88.14 Measuring terminals L1, L2, L3, N and PE to connect test device like installation tester to perform safety and functional tests.
88.15 Terminals for CP signal output to check communication between adapter (simulated
88.16 Electrical vehicle) and charging station.
88.17 Separate phase indication by three LED lamps for easy check if voltage is present.
88.18 Input: Max. 250V (single-phase system) / max. 430V (three-phase system). 50 / 60HZ,
88.19 MAX 10
88.20 IP protection: IP54
88.21 Overvoltage category: CAT II 300V
88.22 Pollution degree: 2
88.23 Protection classification Double insulation
88.24 Safety: IEC/EN 61010-1, IEC61010-2
88.25 Blow moulded plastic case to securely fit all pieces for easy organization and convenient portability.

89 AC EV Charger Setup

89.1 Basic Indicative Diagram

89.2 Built-in energy meter
89.3 Integration or dynamic load management
89.4 Ready for integration with advanced smart building energy systems
89.5 Connectors: IEC60309 Socket, 16A Socket
89.6 Connectivity: GSM, Ethernet, and WiFi, OCPP 1.6J, Authentication via App or RFID, Configuration via the App web portal
89.7 Design: Three phase up to 10kW, 1x 3.3kW IEC60309, 2x 16A Socket output provision
89.8 Safety: Over Current, Over Voltage and Under Voltage, Ground Fault Detection, Surge Protection, Emergency Stop Button
89.9 Input Power: Input Voltage (AC): 415 Vac ± 10% or -6%, Input Frequency: 50Hz, Wires: Three Phase
89.10 Output Power: Output Connector: IEC-60309, Number of Outputs: 3 pin socket, Output Current: 16A Max per output, Output Rating: 240 Vac
89.11 Environment: Ambient Temperature: 0° C to 55° C, Storage Temperature: -20° C to 60° C, Altitude: < 2000 mtr, Humidity: 5% to 95%, non-condensing
89.12 User Interface and Control: Display: 4.3” Graphic Display, Language: English, Push Button: Emergency Stop (Mushroom Red), User Authentication via User Interface / QR Code / RFID Card / Password Login, Visual Indication: RGB LEDs, RFID Specifications: RC 522 RFID Reader ISO/IEC 14443A/MIFARE

89.13 Protection: Over Current, Under Voltage, Over Voltage, Residual Current, Surge Protection, Short Circuit, Ground Fault Protection, Emergency Shutdown with Alarm, Over Temperature, Protection Against Electric Shock

89.14 Communication: Connectivity and CMS: OCPP v1.6 over 10/100 Base-T Ethernet (standard), GSM Modem (4G) and WiFi, Charger and Vehicle: As per BEVC-AC 001 specifications

89.15 Mechanical: Ingress Protection: IP 54, Sheet Metal: CRCA Sheet, Coating: Natural Coated, Certification: ARAI Certified

90 Battery Tester with inbuilt printer

90.1 Basic Indicative Diagram

90.2 12V and 24V Car Battery Analyzer with Printer

90.3 Test 12V and 24V Cranking and Charging Systems

90.4 Test Functions: Battery Resistance, Voltage, CCA, Health & Charge

90.5 Cold Cranking Amps Measuring range : 100~1400A

90.6 Should Support: 12V car Lead-acid battery (AGM, GEL, EFB)

90.7 Analysis result: Good Battery, Good Recharge, Charge Retest, Replace Bad Cell & Replace Battery.

90.8 Auto save latest one time testing result

90.9 Print out result directly (built in printer)

90.10 One-click function key: shortcut for 2 quick function including voltmeter and quick test.

90.11 Protection of short-circuit and reverse connection

90.12 Test battery in & out of vehicle

90.13 Accessories: Thermal Paper (Consumable), USB Cable, Software CD, Carrying case with foam inserts.

91 Lighting and Wiring System for Electric Vehicle

91.1 Basic Indicative Diagram

91.2 The Lighting and wiring layout should be fabricated using original wiring diagram of Electric Passenger Car of any major Indian OEM

91.3 The chart should be printed on to Organic glass board

91.4 RGB LED should be connected at the rear end of the printed diagram

91.5 Individual switches should be provided for different circuitries.

91.6 By pressing the switch for each circuit, the respective flow should be indicated. e.g if the switch for External charging is pressed , then the light flow from 230V Wall to On board charge should be shown by separate colour.

91.7 Onboard charger (60 V DC) to DC to DC Convertor and Battery to be shown in RED colour Running LED

91.8 When the Charger is off, the current flow from the Battery 60 V DC to DC-to-DC convertor to be shown in Red colour

91.9 DC to DC Convertor (12V DC) to Lighting and Control System to be shown in Green Colour Running LED

91.10 Battery to Motor Controller and From Motor controller to be shown in Red Led.

91.11 Motor controller to Hub Motor three phase connection to be shown three different colour Red one phase, second phase in Yellow and Third Phase in Blue colour running LED.

91.12 Head light connections and circuitry will be shown by LED lighting.

91.13 Tail lamp, Horn system etc., will also be shown wit LED lighting for Circuit explanation.

91.14 The LED chart functioning will be done so that different circuits and its current flow can be demonstrated.

91.15 Suitable Work bench

91.15.1 Workbench with minimum dimensions: 150 mm (W) X 900 mm (L) X 750 mm (H)

91.15.2 The entire structure including Panel and workbench should be of MS (Powder Coated) or suitable Aluminium structure (to withstand minimum 50 kg) may be supplied.

92 Instructor/ Office Chair: Non-Revolving, Mid Back, Mesh

92.1 Basic Indicative Diagram:

92.2 Conforming to BIS Code 513, 303, 7138, 7888, 12637 & 13871

92.3 Dimensions:

92.3.1	Overall Size:	610W X 610D X 900H mm, ±10 mm.
92.3.2	Seat Size:	470W X 480D X 460H mm, ±10 mm.
92.3.3	Mid Back Size:	475W X 580H mm, ±10 mm
92.3.4	Net Weight:	Minimum 10 Kgs

92.4 Construction:

92.4.1 Seat:
Seat shall be made up of 12 mm, ±1 mm thick hot-pressed plywood, upholstered with fabric and moulded polyurethane foam.

92.4.2 Back:
Back is injection moulded in glass filled Nylon (as per design shown in the image including horizontal stripes on the rear face of back rest) which is upholstered with Mesh fabric.

92.4.3 Seat Foam:
High Resilience Polyurethane Foam:
The High Resilience Polyurethane Seat Foam shall be moulded with density = 45 ±2 Kg/m3 and Hardness = 20 ± 2 Kgs on Hampden machine complying to IS:7888 at 25% compression and it should be covered with fabric as per manufacturer's shade card. The polyurethane foam shall be as per manufacturer's specification.

92.4.4 Armrest:
The one-piece armrests shall be injection moulded from black co-polymer Polypropylene. Tested to perform 60,000 cycles for a load of 40 Kgs applied at 10 Deg.

92.4.5 Understructure Assembly:
The understructure assembly is a cantilever type powder coated (DFT 50-60 microns) tubular mainframe made of dia. 25 ± 3 mm X 2 ± 1.6 mm thick M.S. ERW Tube (IS: 7138).

92.5 Performance:

92.5.1 The weight bearing capacity of the chair should be minimum 125Kgs.

92.6 Finish:

92.6.1 Epoxy Polyester Powder to the thickness of minimum 50 - 60 microns (±10). The body including understructure, framework, legs, storage shelf, steel plates including fittings involves an 8-step powder coating process consisting of antirust surface treatment viz. hot water rinse, knock of degreasing, degreasing, cold water rinse, phosphating, cold water rinse,

passivation, dry off oven treatment and finished with powder coating using epoxy polyester powder of minimum 50 - 60 microns (±10). The material is then oven baked with a controlled temperature of 180 deg. C to 200 deg. C.

92.6.2 The powder coating treatment shall strictly comply with IS:13871 (1993) inclusive of method of tests i.e. Dry film/ coating thickness, Finish, Gloss 60°, Colour retention, Scratch hardness, Impact resistance test, Conical Mandrel test, Erichsen cupping test, Pencil hardness, DFT measurement, Salt spray test, Adhesion Cross cut test, Rub test with MEK, Protection against humidity, Resistance to boiling water, lubricating oil, petrol, heat double bake, bleeding, detergents, acid/ alkali. The test reports shall be submitted along with the tender.

92.7 Colour:

92.7.1 The colour of the Fabric shall be Jet Black and the powder coating shall be Jet Black.

92.7.2 Final colour scheme will be approved by DVET at the time of placement of order. Manufacturer to furnish various colour schemes available with them.

92.8 Manufacturing Process: As per Annexure A attached with this Specification Document.

92.9 Marking: Each chair shall be clearly and legibly marked on its surface with the manufacturer's name or trademark and also the year of manufacture.

92.10 Mode of Supply: Knock down condition for assembly at site/ Assembled ready to use.

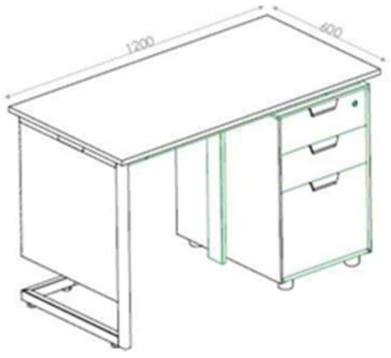
92.11 Packing: In the absence of any specific agreement as to the mode of packing, each chair shall be properly protected to prevent damage of the surface and edges in transit and in storage.

92.12 Warranty: Minimum 1 Year against all manufacturing defects

92.13 Country of Origin: India

93 Instructor/ Office Table

93.1 Basic Indicative Diagram:



93.2 Conforming to BIS Code 513, 7138, 303, 2046 & 13871.

93.3 Dimensions:

93.3.1 Overall Size: 1200L X 600D X 740H mm, ±10 mm.

93.3.2 Net Weight: Minimum 30 Kgs

93.4 Construction:

93.4.1 Top Work surface:

- 19 mm, ±1 mm thick BWP plywood (IS:303) finished with 0.8-1.0mm

thick matt finish decorative laminate (IS:2046) with TW fillet edge lipping all over the work surface edges finished in matching colour.
- The worktop shall be provided with the slot for grommet, as per requirement.

93.4.2 Understructure:
- Rectangular Frame Fabricated component in 1.2 mm thick CRCA (IS: 513).

93.4.3 Leg:
- Fabricated component in 38 mm x 25 mm x 1.2 mm thick CRCA ERW Tube (IS: 7138).
- Plastic Cap for Cable travel- Injection Moulded Polypropylene.
- Leveller glide for Leg- Nylon 6 and MS Bolt.

93.4.4 Storage Pedestal:
- Out of 3 drawers (Box + Box + File), the bottom most will be the file drawer and top drawer shall have a pencil tray. The storage unit shall also have suitable sliding arrangement, handle locking facility, etc.
- Shell- 0.6 mm thick CRCA (IS: 513).
- Drawer Tray- 0.6 mm thick CRCA (IS: 513).
- Drawer Front- 0.8 mm thick CRCA (IS: 513).
- Frame Assembly- 1.2 mm thick CRCA (IS: 513).
- Lock- 10 Lever Cam Lock central locking mechanism.
- Handle- Injection Moulded Polypropylene.
- Leveller- Nylon 6 and MS Bolt.

93.4.5 Wire Management:
- Entry of wires into the Table shall be possible from the floor.
- Horizontal Wire Carrier: 0.7 mm thick CRCA (IS: 513)
- Vertical Wire Carrier: 0.8 mm thick CRCA (IS: 513)
- Only provision of carrier for electrical/ data slots below the work top shall be provided

93.5 Finish:

93.5.1 Epoxy Polyester Powder to the thickness of minimum 50 - 60 microns (±10). The body including understructure, framework, door with hinges, legs, storage shelf, steel plates including fittings involves an 8-step powder coating process consisting of antirust surface treatment viz. hot water rinse, knock of degreasing, degreasing, cold water rinse, phosphating, cold water rinse, passivation, dry off oven treatment and finished with powder coating using epoxy polyester powder of minimum 50 - 60 microns (±10). The material is then oven baked with a controlled temperature of 180 deg. C to 200 deg. C.

93.5.2 The powder coating treatment shall strictly comply with IS:13871 (1993) inclusive of method of tests i.e. Dry film/ coating thickness, Finish, Gloss 60°, Colour retention, Scratch hardness, Impact resistance test, Conical Mandrel test, Erichsen cupping test, Pencil hardness, DFT measurement, Salt spray test, Adhesion Cross cut test, Rub test with MEK, Protection against humidity, Resistance to boiling water, lubricating oil, petrol, heat double bake, bleeding, detergents, acid/ alkali. The test reports shall be submitted along with the tender.

93.6 Colour:

93.6.1 The colour of the laminate shall be Silver Grey/ Teak and hues of Grey for framework.

93.6.2 Final colour scheme will be approved by DVET at the time of placement of order. Manufacturer to furnish various colour schemes available with them.

93.7 Manufacturing Process: As per Annexure A attached with this Specification Document.

93.8 Marking: Each Table shall be clearly and legibly marked on its surface with the manufacturer's name or trademark and also the year of manufacture.

93.9 Mode of Supply: Knock down condition for assembly at site/ Assembled ready to use.

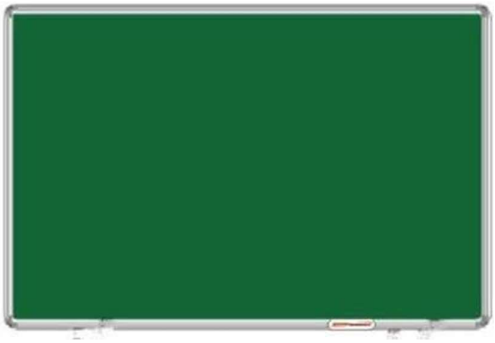
93.10 Packing: In the absence of any specific agreement as to the mode of packing, each Table shall be properly protected to prevent damage of the surface and edges in transit and in storage.

93.11 Warranty: Minimum 1 Year against all manufacturing defects

93.12 Country of Origin: India

94 Green Board: 4 X 6 Feet

94.1 Basic Indicative Diagram



94.2 Confirming to IS Code: 3087, 733.

94.3 Dimensions:

94.3.1 Overall Size: 1810L X 1210H mm, ±10 mm

94.3.2 Net Weight: Minimum 25 Kg

94.4 Green Board with Ceramic Coated Steel Sheet Top Surface: Steel writing board for writing purpose mounted on wooden based particles board (as per IS: 3087) with electro galvanized backing steel sheet and frame anodized extruded Aluminium alloy hollow section.

94.5 Writing Surface: The writing top surface shall be made of steel sheet of thickness 0.27 to 0.30 mm. It shall have vitreous enamel coating of 0.095 mm min. thickness on top and 0.03 mm min. on the back. The top shall be free from waviness and shall show excellent erasability.

94.6 Core Materials: The core material shall be 9 mm thick wood Base plain particle board. Supported with Test Certificates of the Manufacturers.

94.7 Backing Materials: The backing material sheet shall be minimum 0.25 mm thick electro galvanized steel sheet. Both the top and the backing sheet shall be properly fixed with particle board using rubber-based adhesive to avoid any moisture absorption. (Supported with Test Certificates of the Manufacturers.)

94.8 Aluminium Frame:

94.8.1 The Board shall have all round framing of anodized extruded aluminium alloys hollow section. Designation 63400 as per IS: 733-1983 with Amendment No. 1 (Reaffirmed 2006) Edition 4.1. (Supported with Test Certificates of the manufacturer)

94.8.2 The Frame section shall be

- Front: 25 ±1.0 mm
- Side: 18 ±1.0 mm
- Wall thickness: 1 ±0.1 mm

94.9 Fitting Accessories:

94.9.1 The writing board shall be provided with suitable heavy duty wall mounting Brackets.

94.9.2 The board should be provided with necessary fitting clamps. The clamps should be Mild steel with suitable corrosion free coating like chrome plating/ Powder coating material to sustain board weight.

94.9.3 A set of 4 nos. of Screw and 4 nos. for Rawal Plugs should be provided with each board for fitting on the wall.

94.10 Board Corners: The corner of the board should be made up with 100% virgin ABS material.

94.11 Free Accessories:

94.11.1 Pen/ Chalk Tray: Qty 1 No.

94.11.2 Magnetic Duster: Qty 1 No.

94.12 Packing: The Board shall be packed in corrugated paper packing/ box for local delivery and in wooden crate for dispatch by rail/ road transport to withstand transit hazards.

94.13 Marking: Each Board shall be clearly and legibly marked on its surface with the manufacturer's name or trademark and also the year of manufacture.

94.14 Mode of Supply: Knock down condition for assembly at site/ Assembled ready to use.

94.15 Warranty: Minimum 1 Year against all manufacturing defects

94.16 Country of Origin: India

95 Stool: Height 600 mm

95.1 Basic Indicative Diagram:



95.2 Conforming to BIS Code 7138, 303, 2046, 347, 4837 & 13871.

95.3 Dimensions:

95.3.1	Overall Size:	350W X 350D X 600H mm, ±10 mm.
95.3.2	Seat Size:	350 X 350 mm, ±10 mm.
95.3.3	Height:	600 mm, ±10 mm.
95.3.4	Net Weight:	Minimum 7 Kgs

95.4 Construction:

95.4.1 Seat of the stool shall be made of 25 mm thick BWP plywood finished with 0.8-1.0 mm thick matt finish decorative laminate with TW fillet edge lipping all over the work surface edges finished in matching colour.

95.4.2 The seat top shall be fitted using bolt and nut assembly by drilling through-holes in the metal frame and wooden seat (pre-application of laminate). Two nos. 6 mm dia. stainless steel/ zinc-coated bolts with nuts and washers across each other shall be used to attach the wooden seat to the frame by tightening the nuts securely to hold the seat in place. The visible bolt shall be covered with plastic caps.

95.4.3 Care shall be taken to ensure all laminated edges are smooth, properly finished, and free from sharp or rough surfaces to prevent potential harm.

95.4.4 Four Legs and Cross braces (below seat and foot rest): Fabricated component in 25 mm x 25 mm x 1.0-1.2 mm thick CRCA ERW Tube (IS: 7138).

95.4.5 The distance between Legs (centre to centre of legs) shall be length of table top minus 50 mm x width of table top minus 50 mm.

95.4.6 The metal framework shall be assembled by means of welding.

95.4.7 All welded joints shall be machine smooth finished, sharp edges to be removed and free from objectionable projection or irregularities.

95.4.8 Ends of legs shall be fitted with shoes of rubber, plastic, or any other resilient material to prevent sliding.

95.4.9 The stool shall be of rigid construction and provide a firm seat surface in all position which a trainee may have to adopt while working.

95.5 Performance:

95.5.1 The weight bearing capacity of the stool shall be approx. 100 - 120Kgs.

95.6 Finish:

95.6.1 Metal framework

- Epoxy Polyester Powder to the thickness of minimum 50 - 60 microns (±10). The body including understructure, framework, legs, storage shelf, steel plates including fittings involves an 8-step powder coating process consisting of antirust surface treatment viz. hot water rinse,

knock of degreasing, degreasing, cold water rinse, phosphating, cold water rinse, passivation, dry off oven treatment and finished with powder coating using epoxy polyester powder of minimum 50 - 60 microns (±10). The material is then oven baked with a controlled temperature of 180 deg. C to 200 deg. C.

- The powder coating treatment shall strictly comply with IS:13871 (1993) inclusive of method of tests i.e. Dry film/ coating thickness, Finish, Gloss 60°, Colour retention, Scratch hardness, Impact resistance test, Conical Mandrel test, Erichsen cupping test, Pencil hardness, DFT measurement, Salt spray test, Adhesion Cross cut test, Rub test with MEK, Protection against humidity, Resistance to boiling water, lubricating oil, petrol, heat double bake, bleeding, detergents, acid/ alkali. The test reports shall be submitted along with the tender.

95.6.2 TW Lipping over the edges of the seat

- The lipping over the edges of the seat shall be finished with varnish of matching colour.

95.7 Colour:

95.7.1 The colour of the laminate and varnish shall be Steel Blue/ Mustard Yellow/ Olive Green.

95.7.2 The colour of the matte/ semi-gloss powder coating shall be Dove Grey for all metal framework.

95.7.3 Final colour scheme will be approved by DVET at the time of placement of order. Manufacturer to furnish various colour schemes available with them.

95.8 Manufacturing Process: As per Annexure A attached with this Specification Document.

95.9 Marking: Each stool shall be clearly and legibly marked on its surface with the manufacturer's name or trademark and also the year of manufacture.

95.10 Mode of Supply: Assembled ready to use.

95.11 Packing: In the absence of any specific agreement as to the mode of packing, each stool shall be properly protected to prevent damage of the surface and edges in transit and in storage.

95.12 Warranty: Minimum 1 Year against all manufacturing defects

95.13 Country of Origin: India

96 Working Table: 8 (L) X 4 (W) X 3 (H) Feet, Wooden Top

96.1 Basic Indicative Diagram

96.2 Conforming to BIS Code 399, 13622, SP 6-1 (1964) & 13871.

96.3 Purpose: Heavy-duty working table for vocational workshop for Fitter and similar

trade, designed to support bench vices, tools, and machining tasks.

96.4 Dimensions:

96.4.1 Overall Size:

- Length: 8 Feet
- Width: 4 Feet
- Height: 3 Feet

96.4.2 Net Weight: Minimum 120 Kgs

96.5 Construction:

96.5.1 Top Work surface:

- The free-standing working table shall be constructed using recommended carpentry joints, nails, screws and steel angle framework to ensure robust assembly and long-term durability.
- The table top shall be fabricated from 40 mm ±2 mm thick high quality solid hardwood planks (e.g. Teak Tectona Grandis, Oak Quercus, Maple Acer, Walnut Juglans Regia, Cherry Prunus), conforming to BIS 399, 13622. Common carpentry joints, such as finger joints, mortise and tenon, or dovetail, are used to connect the planks and create the desired table top shape. The top surface shall be levelled and all edges shall be chamfered and smooth.
- All surfaces of the table top are to be finished in lacquer on all surface.

96.5.2 Understructure:

- Understructure comprising of rectangular top frame, cross-bracing and Legs shall be fabricated component in 5.0 mm thick rolled steel equal angle 'L' shaped designated as ISA 5050, conforming to BIS SP 6-1 (1964). All welded joints/ edges should be machine finished.

96.6 Finish:

96.6.1 Epoxy Polyester Powder to the thickness of minimum 50 - 60 microns (±10). The body including understructure, framework, door with hinges, legs, storage shelf, steel plates including fittings involves an 8-step powder coating process consisting of antirust surface treatment viz. hot water rinse, knock of degreasing, degreasing, cold water rinse, phosphating, cold water rinse, passivation, dry off oven treatment and finished with powder coating using epoxy polyester powder of minimum 50 - 60 microns (±10). The material is then oven baked with a controlled temperature of 180 deg. C to 200 deg. C.

96.6.2 The powder coating treatment shall strictly comply with IS:13871 (1993) inclusive of method of tests i.e. Dry film/ coating thickness, Finish, Gloss 60°, Colour retention, Scratch hardness, Impact resistance test, Conical Mandrel test, Erichsen cupping test, Pencil hardness, DFT measurement, Salt spray test, Adhesion Cross cut test, Rub test with MEK, Protection against humidity, Resistance to boiling water, lubricating oil, petrol, heat double bake, bleeding, detergents, acid/ alkali. The test reports shall be submitted along with the tender.

96.7 Colour:

96.7.1 The colour of the table top shall be clear opaque finished in Lacquer.

96.7.2 The colour shall be hues of Grey for steel framework.

96.7.3 Final colour scheme will be approved by DVET at the time of placement of order. Manufacturer to furnish various colour schemes available with them.

96.8 Manufacturing Process: As per Annexure A attached with this Specification

Document.

96.9 Marking: Each Table shall be clearly and legibly marked on its surface with the manufacturer's name or trademark and also the year of manufacture.

96.10 Mode of Supply: Knock down condition for assembly at site/ Assembled ready to use.

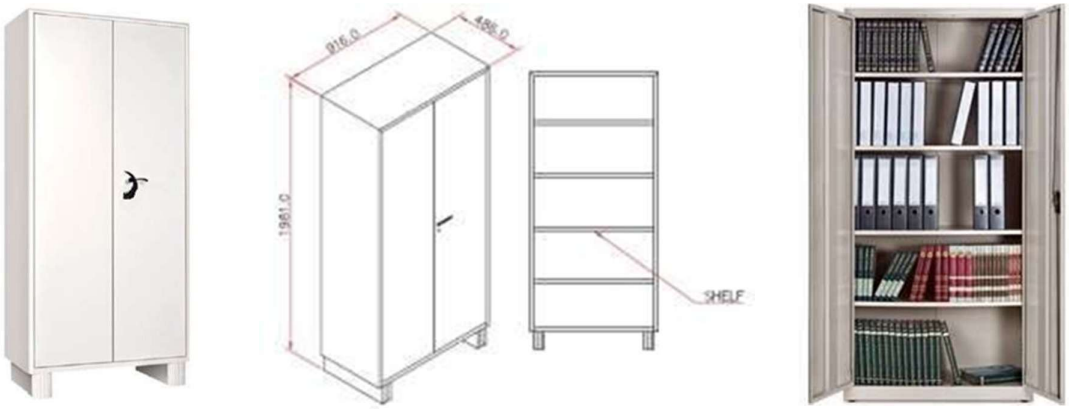
96.11 Packing: In the absence of any specific agreement as to the mode of packing, each Table shall be properly protected to prevent damage of the surface and edges in transit and in storage.

96.12 Warranty: Minimum 1 Year against all manufacturing defects

96.13 Country of Origin: India

97 Steel Cupboard: Large

97.1 Basic Indicative Diagram:



97.2 Conforming to BIS Code 6189, 513 & 13871.

97.3 Dimensions:

97.3.1 Overall Size: 915W X 485D X 1980H mm, ±10 mm.

97.3.2 Net Weight: Minimum 60 Kgs

97.4 Construction:

97.4.1 The construction shall be welded construction with 0.7 mm thick CRCA for shelf and 0.8 mm thick for top and bottom, door, sides and back confirming to IS: 513 -2008 grade. The width of the side sheet shall correspond to the depth of the top. The sides shall extend between the extreme surface of the top and bottom shelves. The width of the back sheet shall correspond to width of the top. The back shall extend between the extreme surface of the top and bottom shelves.

97.4.2 The length of the top and bottom shall cover the width of the cabinet and the breadth shall cover the depth of the cabinet made of 0.8 mm thick CRCA.

97.4.3 The inside folded edges shall have stiffening. The welded edges should be machine finished.

97.4.4 All material should be used of relevant ISI specification.

97.5 Configuration (Doors):

97.5.1 Two door shutters shall be made of 0.8 mm thick CRCA and all other metal component shall be made of 0.9 mm thick CRCA. CRCA D grade conforming to IS: 513 -2008.

97.5.2 Shutter shall have metal stiffeners suitably welded or riveted to stiffen the door. The centre-to-centre distance between two adjacent hinges to the

right side of the cabinet shall have a hole for the handle and key slot for the key of the lock.

97.5.3 The clearance around the door between the door flanges and side top and bottom flanges shall not be more than 1.25 mm.

97.6 Hinges:

97.6.1 The hinges shall be either plain butt type made from CRCA not less than 1.6 mm thick or double folded type fabricated from CRCA sheet not less than 1.25 mm thick.

97.6.2 The hinges shall be secured to the mild steel hinge bracket not less than 2.5 mm thick on one side and shall be secured to the door on the other side of the fulcrum.

97.6.3 The number of hinges per door leaf shall not be less three.

97.7 Lock:

97.7.1 The locking and handle of the storage shall be oxidized Brass Mazak Handle or MS Handle with Nickel Coating with three way locking mechanism with shooting bolt controlled by lock operated by handle with min 03 duplicate keys of Godrej/ Vijayan or of approved make.

97.8 Shelves:

97.8.1 The shelf panel (minimum four nos.) shall be height adjustable and should be made of 0.7 mm thick CRCA steel confirming to IS: 513 -2008 grade to take the maximum load bearing capacity of 75 Kg uniformly distributed per shelf.

97.8.2 Shelves shall have lipped flanges 25 mm in width and 15 mm in depth.

97.8.3 Each shelf shall be supported by four brackets, each fabricated from CRCA steel with a minimum thickness of 1.6 mm. The brackets shall be designed and constructed to provide secure support for the shelf while allowing easy adjustments within the bracket as needed.

97.8.4 Four rack strips with machine punched slots shall be provided for supporting the shelves covering the full height of the cabinet. Rack strips shall be made of CRCA not less than 1.00 mm thick.

97.9 Pedestal:

97.9.1 Two pedestals spanning the depth of the cabinet shall be made from CRCA sheet not less than 1.00 mm thick and shall be properly stiffened.

97.9.2 The pedestal shall not project out of the cabinet and shall be 125 ± 5 mm in height.

97.10 Finish:

97.10.1 Epoxy Polyester Powder to the thickness of minimum 50 - 60 microns (±10). The body including understructure, framework, door including hinges, legs, storage shelf, steel plates including fittings involves an 8-step powder coating process consisting of antirust surface treatment viz. hot water rinse, knock of degreasing, degreasing, cold water rinse, phosphating, cold water rinse, passivation, dry off oven treatment and finished with powder coating using epoxy polyester powder of minimum 50 - 60 microns (±10). The material is then oven baked with a controlled temperature of 180 deg. C to 200 deg. C.

97.10.2 The powder coating treatment shall strictly comply with IS:13871 (1993) inclusive of method of tests i.e. Dry film/ coating thickness, Finish, Gloss 60°, Colour retention, Scratch hardness, Impact resistance test, Conical Mandrel test, Erichsen cupping test, Pencil hardness, DFT measurement, Salt spray test, Adhesion Cross cut test, Rub test with MEK, Protection against humidity, Resistance to boiling water, lubricating oil, petrol, heat

double bake, bleeding, detergents, acid/ alkali. The test reports shall be submitted along with the tender.

97.11 Colour:

97.11.1 The structure shall be epoxy powder-coated in hues of Grey, subject to approval.

97.11.2 Final colour scheme will be approved by DVET at the time of placement of order. Manufacturer to furnish various colour schemes available with them.

97.12 Manufacturing Process: As per Annexure A attached with this Specification Document.

97.13 Marking: Each Steel Cupboard shall be clearly and legibly marked on its surface with the manufacturer's name or trademark and also the year of manufacture.

97.14 Mode of Supply: Knock down condition for assembly at site/ Assembled ready to use.

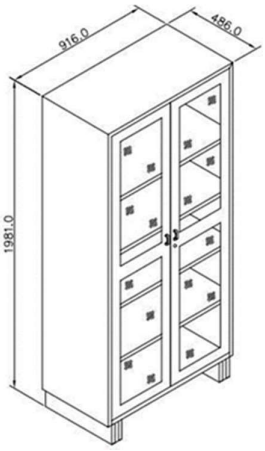
97.15 Packing: In the absence of any specific agreement as to the mode of packing, each Steel Cupboard shall be properly protected to prevent damage of the surface and edges in transit and in storage.

97.16 Warranty: Minimum 1 Year against all manufacturing defects

97.17 Country of Origin: India

98 Steel Book Case

98.1 Basic Indicative Diagram:



98.2 Conforming to BIS Code 6189, 513, 2835 & 13871.

98.3 Dimensions:

98.3.1 Overall Size: 915W X 485D X 1980H mm, ±10 mm.

98.3.2 Net Weight: Minimum 60 Kgs

98.4 Design:

98.4.1 The steel bookcase features a sturdy construction with two framed glass doors, providing visibility and protection for stored items.

98.4.2 It is equipped with five adjustable loading levels, allowing flexible storage for books and documents. The base is elevated on steel pedestals for added stability and durability.

98.4.3 The doors are lockable to ensure security, and the frame is finished with a smooth powder-coated surface for corrosion resistance and a sleek appearance.

98.5 Construction:

98.5.1 The construction shall be welded construction with Prime Quality CRCA confirming to IS: 513 -2008 grade.

98.5.2 Steel Top, Back and side are made from 0.7 mm thick CRCA. Rest in 0.8 mm CRCA confirming to IS: 513 -2008 grade.

98.5.3 All material should be used of relevant ISI specification.

98.6 Configuration (Doors):

98.6.1 Two door shutters shall be made of 0.8 mm thick CRCA sheet with 3 mm thk. Transparent float glass for clear inside vision secured in a metal frame through rubber gasket and all other metal component shall be made of 0.9 mm thick CRCA. 'D' grade conforming to IS: 513 -2008.

98.6.2 The glass shall be free of distortion and waves and both the surfaces of the glass shall be perfectly parallel and shall be of Asahi/ Modi/ Pilkington/ Saint Gobain or of approved make.

98.6.3 Shutter shall have metal stiffeners suitably welded or riveted to stiffen the door. The centre-to-centre distance between two adjacent hinges to the right side of the cabinet shall have a hole for the handle and key slot for the key of the lock.

98.6.4 The clearance around the door between the door flanges and side top and bottom flanges shall not be more than 1.25 mm.

98.7 Hinges:

98.7.1 The hinges shall be either plain butt type made from CRCA not less than 1.6 mm thick or double folded type fabricated from CRCA sheet not less than 1.25 mm thick.

98.7.2 The hinges shall be secured to the mild steel hinge bracket not less than 2.5 mm thick on one side and shall be secured to the door on the other side of the fulcrum.

98.7.3 The number of hinges per door leaf shall not be less three.

98.8 Lock:

98.8.1 The Door shutter shall have one 6 lever Cam lock with min. 03 common key of Godrej/ Vijayan or of approved make.

98.8.2 Two oxidized Brass Mazak Handle or MS Handle with Nickel Coating handle 75 mm long shall be provided on each shutter.

98.8.3 One oxidized brass 75 mm long tower bolt each from inside shall be provided on top and bottom rail of the left-hand side shutter.

98.9 Shelves:

98.9.1 The shelf panel (minimum four nos.) shall be height adjustable and should be made of 0.7 mm thick CRCA steel confirming to IS: 513 -2008 grade to take the maximum load bearing capacity of 75 Kg uniformly distributed per shelf. Shelves shall have lipped flanges 25 mm in width and 15 mm in depth.

98.9.2 Each shelf shall be supported by four brackets, each fabricated from CRCA steel with a minimum thickness of 1.6 mm. The brackets shall be designed and constructed to provide secure support for the shelf while allowing easy adjustments within the bracket as needed.

98.9.3 Four rack strips with machine punched slots shall be provided for supporting the shelves covering the full height of the cabinet. Rack strips shall be made of CRCA not less than 1.00 mm thick.

98.10 Pedestal:

98.10.1 Two pedestals spanning the depth of the cabinet shall be made from CRCA sheet not less than 1.00 mm thick and shall be properly stiffened.

98.10.2 The pedestal shall not project out of the cabinet and shall be 125 ± 5 mm in height.

98.11 Finish:

98.11.1 Epoxy Polyester Powder to the thickness of minimum 50 - 60 microns (±10). The body including understructure, framework, door including hinges, legs, storage shelf, steel plates including fittings involves an 8-step powder coating process consisting of antirust surface treatment viz. hot water rinse, knock of degreasing, degreasing, cold water rinse, phosphating, cold water rinse, passivation, dry off oven treatment and finished with powder coating using epoxy polyester powder of minimum 50 - 60 microns (±10). The material is then oven baked with a controlled temperature of 180 deg. C to 200 deg. C.

98.11.2 The powder coating treatment shall strictly comply with IS:13871 (1993) inclusive of method of tests i.e. Dry film/ coating thickness, Finish, Gloss 60°, Colour retention, Scratch hardness, Impact resistance test, Conical Mandrel test, Erichsen cupping test, Pencil hardness, DFT measurement, Salt spray test, Adhesion Cross cut test, Rub test with MEK, Protection against humidity, Resistance to boiling water, lubricating oil, petrol, heat double bake, bleeding, detergents, acid/ alkali. The test reports shall be submitted along with the tender.

98.12 Colour:

98.12.1 The structure shall be epoxy powder-coated in hues of Grey, subject to approval.

98.12.2 Final colour scheme will be approved by DVET at the time of placement of order. Manufacturer to furnish various colour schemes available with them.

98.13 Manufacturing Process: As per Annexure A attached with this Specification Document.

98.14 Marking: Each Steel Book Case shall be clearly and legibly marked on its surface with the manufacturer’s name or trademark and also the year of manufacture.

98.15 Mode of Supply: Knock down condition for assembly at site/ Assembled ready to use.

98.16 Packing: In the absence of any specific agreement as to the mode of packing, each Steel Book Case shall be properly protected to prevent damage of the surface and edges in transit and in storage.

98.17 Warranty: Minimum 1 Year against all manufacturing defects

98.18 Country of Origin: India

99 7 Drawer Tool Trolley: W:D:H = 700:450:900, ± 25 mm

99.1 Basic Indicative Diagram:

99.2 7 Drawer Tool Trolley with overall Dimensions:
- 99.2.1 Width: 700 mm
- 99.2.2 Depth: 450 mm
- 99.2.3 Height (with Wheels): 900 mm
- 99.2.4 Variation: ± 25 mm

99.3 Minimum Load capacity: 450 Kg
99.4 Per Drawer Average load capacity: 45 Kg
99.5 Centralized keyed locking system with 3 Keys
99.6 Single Operation for opening all drawers
99.7 Double Wall Steel Construction with thickness:
- 99.7.1 Base and Side: 0.8 mm
- 99.7.2 Front Cover: 1.6 mm

99.8 Corrosion resistant powder coated finish
99.9 Self-locking ball bearing drawer slides
99.10 All drawer's lines with 2 mm sheet
99.11 4 Heavy Duty Castors: 2 fixed & 2 swivel with toe lock with ø125 mm X 50 mm thickness
99.12 Heavy Duty Side Handle
99.13 Rubber Mat on top to avoid scratches with 5mm Thickness
99.14 Inside drawers Eva Sheet with 2mm thickness
99.15 Color: Blue, Yellow, Red, Orange or Black

100 5 Tray Cantilever Tool Box: W:D:H = 450:200:200, ± 20 mm

100.1 Basic Indicative Diagram:

100.2 5 Tray Cantilever box with overall Dimensions:
- 100.2.1 Width: 450 mm
- 100.2.2 Depth: 200 mm

100.2.3 Height: 200 mm
100.2.4 Variation: ± 20 mm
100.3 Corrosion resistant powder coated finish
100.4 Riveting should be of Stainless Steel
100.5 Minimum Load Capacity: 33 kg
100.6 Construction in CRC Sheet with thickness:
100.6.1 Base and Side: 0.65 mm
100.6.2 Partition: 1.0 mm
100.7 Joining Clips should be of CRC Sheet with 1.5 mm thickness
100.8 Handle should be of ERW MS Pipe ø 12.7 mm X 1.0 mm thick
100.9 Provision of Padlock in lid
100.10 Color: Blue, Yellow, Red, Orange or Black

101 Dummy/ Mannequins: Male, Fiber

101.1 Basic Indicative diagram

101.2 Should be suitable for display stitched cloths made for male and/ or PPE Kit
101.3 Material: FRP fiber glass
101.4 Realistic anatomical proportions and features
101.5 Straight Hand
101.6 Standing posture
101.7 Articulated arms and legs for realistic clothing/ PPE Kit fitting
101.8 Stable stainless steel (SS) base plate, minimum 8 mm thickness
101.9 Skin Tone finish
101.10 Dimension Dimensions (Approx.):
101.10.1 Height: 1860 mm
101.10.2 Shoulder: 540 mm
101.10.3 Chest: 1040 mm
101.10.4 Waist: 770 mm
101.10.5 Hip: 1030 mm

102 Mobile Lockable Shoe Rack: 24 Pair

102.1 Basic Indicative Diagram

102.2 Individual Lockable Boot Rack
102.3 Capacity: 24 Pair
102.4 Dimension:
102.5 Height: minimum 2000 mm
102.6 Width: minimum 1065 mm
102.7 Depth: minimum 500 mm
102.8 Construction:
- 102.8.1 Material: 304 Grade Stainless
- 102.8.2 Steel square section: 40 mm X 40 mm for frame and 25 mm X 25 mm for Individual Shoe section:
- 102.8.3 Welded construction
- 102.8.4 Numbered end plates for location guide
- 102.8.5 Black plastic end caps

102.9 Zinc plated swivel castors with 4 nylon wheels of which 2 are lockable/ braked

103 Three wheeler Electric Rickshaw

103.1 Basic Indicative Diagram

103.2 Purpose:
- 103.2.1 Hands-on, interactive training platform replicating real-world electric 3-wheeler systems
- 103.2.2 Designed for practical skill development in EV diagnostics, repair, and maintenance

103.3 Electric Powertrain
- 103.3.1 Brushless DC (BLDC) Motor, 1.25 kW rated, 1.80 kW peak output
- 103.3.2 Maximum rotational speed: 3000 RPM
- 103.3.3 Programmable motor controller included

103.4 Transmission System
- 103.4.1 Mechanical gear drive
- 103.4.2 Integrated differential, minimum 33" width

103.5 Performance
- 103.5.1 Operating speed range: 25 km/h (under simulated load)
- 103.5.2 Reverse function included

103.6 Electrical System
- 103.6.1 Input power supply: 48V DC (external source)
- 103.6.2 Battery charging interface: 48V, 15A, compatible with standard EV chargers
- 103.6.3 Battery Capacity: 48V, 105AH Lithium Ion.

103.7 Braking System
- 103.7.1 Drum brakes (mechanical) on both front and rear
- 103.7.2 Manual actuation and adjustment for training

103.8 Suspension
- 103.8.1 Front: Telescopic fork
- 103.8.2 Rear: Leaf spring

103.9 Instrumentation and Diagnostics
- 103.9.1 Dashboard with digital/ analog display (speed, battery, temperature, fault codes)
- 103.9.2 Diagnostic port (OBD or equivalent) for system monitoring
- 103.9.3 Accessible test points for multimeter, clamp meter, oscilloscope

103.10 Safety and Serviceability
- 103.10.1 Emergency high-voltage disconnect switch
- 103.10.2 Safety interlocks for battery/ high-voltage access
- 103.10.3 Transparent or lockable protective covers

103.11 Training Features
- 103.11.1 All key EV components exposed or easily accessible
- 103.11.2 Built-in fault simulation (electrical, mechanical, battery) for diagnostics
- 103.11.3 Clearly labeled wiring harness with standard connectors and color codes

103.11.4 Includes fuses, relays, grounding points
103.12 Dimensions and Mounting
103.12.1 Rigid frame with lockable wheels for mobility
103.12.2 Approximate dimensions: 2.80 m (L) X 1.0 m (W) X 1.7 m (H)
103.13 Documentation and Support
103.13.1 Detailed user manual (operation, maintenance, safety)
103.13.2 Complete, color-coded wiring diagrams (laminated)
103.14 Compliance
103.14.1 Should enables identification, testing, diagnostics, service, maintenance, and safety protocol training
103.15 Accessories
103.15.1 Basic hand tool set (spanners, screwdrivers, pliers, etc.)
103.15.2 Digital multimeter
103.15.3 48V, 15A battery charger
103.15.4 Protective gloves and safety goggles
103.15.5 Fuses, relays, wiring harness repair kit
103.16 Display Board:
103.16.1 Display Board for Three wheeler Electric Rickshaw
103.16.2 Should have a colorful printed schematic diagram and circuit diagram.
103.16.3 Parts names with explanation should be colour printed on 400 gsm water proof paper sheet laminated on printed side.
103.16.4 The printed sheet to be placed on 5 mm MDF board with Polystyrene Photo Frame Moulding and fixtures for wall hanging.
103.16.5 The size of the display board approximately 1200 mm X 900 mm

104 Four wheeler Buggy (Golf Cart)

104.1 Basic Indicative Diagram

104.2 4 Seated Four Wheeler Buggy (Golf Cart)
104.3 Commercial vehicle 5KW
104.4 3-Phase AC induction motor with 48V-350 A controller
104.5 Single speed direct drive
104.6 Should be able to assemble and dis-assemble the vehicle.
104.7 Suitable Tools should be provided.
104.8 Dimension:
104.9 Approximate dimensions: 3.00 m (L) X 1.5 m (W) X 1.7 m (H)
104.10 Ground clearance: minimum 150 mm
104.11 Robust and durable construction, making them suitable for in-campus rides.
104.12 Turning radius of 3.5 meters
104.13 Maximum speed of 25 km/h

104.14 High-quality 145/80 R12 LT tubeless tires (4 plies)
104.15 Frame/Chassis: Powder coated tubeless steel ladder frame
104.16 Front/ Rear body: ABS
104.17 Rim: 12" Aluminium alloy rims
104.18 Windshield: Polycarbonate
104.19 Front disc brakes
104.20 Digital instrument cluster
104.21 Font Double Wishbone Suspensions
104.22 Paddle Type Forward and Reverse Switch
104.23 Accessories
- 104.23.1 Basic hand tool set (spanners, screwdrivers, pliers, etc.)
- 104.23.2 Digital multimeter
- 104.23.3 Compatible Battery Charger
- 104.23.4 Protective gloves and safety goggles
- 104.23.5 Fuses, relays, wiring harness repair kit

104.24 Display Board:
- 104.24.1 Display Board for Four wheeler Buggy (Golf Cart)
- 104.24.2 Should have a colorful printed schematic diagram and circuit diagram.
- 104.24.3 Parts names with explanation should be colour printed on 400 gsm water proof paper sheet laminated on printed side.
- 104.24.4 The printed sheet to be placed on 5 mm MDF board with Polystyrene Photo Frame Moulding and fixtures for wall hanging.
- 104.24.5 The size of the display board approximately 1200 mm X 900 mm

104.25 Lead Acid Battery 8V, 180 AH (with suitable charger with min 10A Rating).

105 Electric Vehicle Diagnostic Scanner

105.1 Basic Indicative Diagram

105.2 Should be able to scan and diagnose faults of EV Vehicles like Suzuki, TATA, Toyota, Hyundia, MG, KIA, Scoda, Fiat, Ford, Jeep, Nissan, Renault, Honda, Hyundai, Izuzu, Mercedez, etc.
105.3 Operation System: Android 10.0
105.4 Processor: 2.0 GHz, Quad-core
105.5 Display Size: minimum 10"
105.6 Resolution: 1280 X 800
105.7 RAM: 4GB
105.8 Storage: 64GB
105.9 Camera Rear: 8MP
105.10 Battery: 6300mAh
105.11 Connectivity: Wi-Fi, Bluetooth and USB Wired
105.12 Dimension: Minimum 270 X 190 X 40 (mm)
105.13 Interface: Type A1 and Type C1
105.14 Should also support communication protocols such as CAN, CANFD, DoIP, etc.
105.15 Connection

105.15.1 Wireless communication for flexible and easy connections for diagnostics
105.15.2 With Wire (Cabled) connection for stable connection for advanced work like coding.
105.16 Should Provide Special function videos for the Indian and premium cars
105.17 Remote diagnosis and diagnostic feedback
105.18 One-click Online update facility.
105.19 Coverage of Vehicle Diagnose Facility: Minimum 100 Brands (EV and Normal)
105.20 Should have Quick access to diagnose by the diagnostic records.
105.21 Should Support read DTC, clear DTC, read data stream and full functions.
105.22 Should Provide more than 30,000 trouble codes, their service & repair cases, location and guidance designed for the Indian market
105.23 Functions: Brake Reset , Adaptive Front Lighting , Gearbox Relearn, Seat Occupancy Calibration, Oil Maintenance Reset, Stop/Start Reset , High-Voltage Battery ,Air/Fuel Reset ,Steering Angle Reset ,IMMO Program , Sunroof Reset ,Battery Matching ,Tire Reset ,Air Level Calibration ,ABS Bleeding ,Electric , Throttle Relearn, Coolant Bleed ,Injector Coding , Transport Mode, Windows Calibration, Crank Position, Sensor Adaptive Learning, EGR Adaption, Immobilizer Reset, Language Change, NOx Sensor Reset, Clutch Matching, Motor Angle Calibration, TPMS Reset Database, Intelligent Cruise Control System, Turbocharging Matching, Gas Particulate Filter Regeneration, AC System Relearn/ Initialization, Engine Power Balance Monitoring, ECU Reset, etc.
105.24 Blow molded plastic case to securely fit all pieces for easy organization and convenient portability with proper foam inserts.

106 Solar based Charging System

106.1 Basic Indicative Diagram

106.2 Suitable Control Panel along with Work bench
106.3 Workbench dimensions: 1200 mm (L) X 900 mm (W) X 750 mm (H)
106.4 Work area available to the students should will be atleast 8 square feet.
106.5 The entire structure including Panel and workbench should be of MS (Powder Coated) or suitable Aluminium structure (to withstand minimum 50 kg) may be supplied.
106.6 Universal Solar PV Based Solar Off-Grid and Hybrid Power charging System.
106.7 2 KW OFF-GRID AND HYBRID System With 330 Watt/ 24 Volts Solar PV Panel with inbuilt MPPT charge Controller 20 Amps and 24 V/ 40 AH Battery and metering arrangement.
106.8 OFF- GRID Inverter: 2 KW IOT based OFF -Grid solar Inverter (hybrid model) with 40 AH battery pack with loading arrangement.
106.9 Battery: 24 Volts @ 40 Ah
106.10 Solar Panel: 330 watts X 1 No. solar panel connected to the UPS for charging the battery and load.
106.11 Metering system to measure DC Voltage, current and power, AC voltage and

Current.

106.12 Output 220V/15A socket with switch and timer control

106.13 Should be able to perform the following practicals

106.13.1 Should able to learn the basics of solar energy, including how photovoltaic panels capture sunlight and convert it into electrical energy.

106.13.2 Should able to learn about the types of solar panels, their efficiency, and the materials used in their construction.

106.13.3 Effects of installing and positioning solar panels for optimal sunlight exposure.

106.13.4 Should able to perform differentiation between off-grid and grid-tied solar systems and their applications, including standalone power generation and feeding excess energy back to the grid.

106.13.5 Should able to learn use of energy storage systems, such as batteries, to store excess solar energy for later use or as a backup power source.

106.13.6 Should able to learn charge controllers and their role in regulating the flow of electricity from solar panels to charging devices, ensuring safe and efficient charging.

106.13.7 Should able to learn how inverters convert direct current (DC) from solar panels into usable alternating current (AC) for charging electronic devices.

106.13.8 Should able to Explore the principles of charging and discharging batteries using solar energy and their impact on battery performance and lifespan.

106.13.9 Should able to learn how solar-generated electricity is distributed and used to power various devices and systems, including appliances and electric vehicles

106.14 Display Board:

106.14.1 Display Board for Solar based Charging System

106.14.2 Should have a colorful printed schematic diagram and circuit diagram.

106.14.3 Parts names with explanation should be colour printed on 400 gsm water proof paper sheet laminated on printed side.

106.14.4 The printed sheet to be placed on 5 mm MDF board with Polystyrene Photo Frame Moulding and fixtures for wall hanging.

106.14.5 The size of the display board approximately 1200 mm X 900 mm

107 Electric Vehicle Tool Kit

107.1 Basic Indicative Diagram

107.2 VDE Approved Double Layered Insulated Tool Set suitable for repair and maintenance of Electric Vehicle

107.3 Should be supplied with seven drawer tool Trolley

107.4 Should have custom die-cut foam inserts to securely organize and protect each tool

within the trolley's drawers. Foam inserts should be made up of two-color design, which enhances tool management and safety by providing immediate visual identification of missing tools.

107.5 Manufactured according to EN/IEC 60900.
107.6 Each tool individually tested at 10,000 V AC
107.7 Tool Kit should be approved by any major Electric Vehicle Manufacturer in India
107.8 Tool set consisting of
- 107.8.1 Insulated Combination Plier - 200 mm: 1 Qty.
- 107.8.2 Insulated Nose Plier - 150 mm: 1 Qty.
- 107.8.3 Insulated Side Cutting Plier - 150 mm: 1 Qty.
- 107.8.4 Insulated Wire Stripper - 150 mm: 1 Qty.
- 107.8.5 Insulated Slotted Screwdriver - 2.5 mm X 75 mm: 1 Qty.
- 107.8.6 Insulated Slotted Screwdriver - 6.5 mm X 150 mm: 1 Qty.
- 107.8.7 Insulated Phillips Screwdriver - PH0 X 60: 1 Qty.
- 107.8.8 Insulated Phillips Screwdriver - PH2 X 100: 1 Qty.
- 107.8.9 Insulated Phillips Screwdriver - PH3 X 150: 1 Qty.
- 107.8.10 3/8" Insulated 2-Layer Hex Socket Set - 10 mm, 11mm, 12 mm, 13 mm, 14 mm, 16 mm, 17 mm, 18 mm , 19 mm, 21 mm, 22 mm: 1 Qty.
- 107.8.11 3/8" Insulated 2-Layer Extension Bar - 125 mm: 1 Qty.
- 107.8.12 3/8" Insulated 2-Layer Extension Bar - 250 mm: 1 Qty.
- 107.8.13 3/8"Insulated T-shape - 200 mm: 1 Qty.
- 107.8.14 Insulated 3/8" Ratchet Wrench - 200mm: 1 Qty.
- 107.8.15 Insulated Open End Wrench Set - 8 mm, 10 mm, 12 mm, 13 mm, 14 mm, 17 mm, 19 mm: 1 Qty.

107.9 Torque Wrench 1/2" Square Drive - 5 to 50 Nm: 1 Qty.
107.10 Torque Wrench 1/2" Square Drive - 40 to 200 Nm: 1 Qty.
107.11 Insulated Ring Wrench Set - 7mm, 8 mm, 9 mm, 10 mm, 11 mm, 12 mm, 13 mm, 14 mm, 15 mm, 16 mm, 17 mm, 18 mm, 19 mm, 21 mm, 22 mm, 24mm: 1 Qty.
107.12 Insulated Screwdriver - 5 mm X 75 mm: 1 Qty.
107.13 Insulated Screwdriver - 6 mm X 75 mm: 1 Qty.
107.14 Insulated Screwdriver - 7 mm X 75 mm: 1 Qty.
107.15 Insulated Screwdriver - 8 mm X 75 mm: 1 Qty.
107.16 Insulated Screwdriver - 9 mm X 75 mm: 1 Qty.
107.17 Insulated Torx Screwdriver - T10 X 70 mm: 1 Qty.
107.18 Insulated Torx Screwdriver - T15 X 80 mm: 1 Qty.
107.19 Insulated Torx Screwdriver - T20 X 100 mm: 1 Qty.
107.20 Insulated Torx Screwdriver - T25 X 125 mm: 1 Qty.
107.21 Insulated Torx Screwdriver - T30 X 130 mm: 1 Qty.
107.22 Insulated 250 mm Adjustable Wrench: 1 Qty.
107.23 Insulated Cable Knife (Straight Blade) - 50 X 80 mm: 1 Qty.
107.24 Insulated Hex Wrench Set - 3 mm, 4 mm, 5 mm, 6 mm, 8 mm, 10 mm, 12 mm: 1 Qty
107.25 All tools with ergonomically shaped 2-component handles for comfortable non slip grip

108 Electrically Insulating Blanket

108.1 Basic Indicative Diagram

108.2 Purpose: Electrically Insulating Blankets are designed specifically for use during Electric Vehicle (EV) repair, maintenance, and service operations. The blankets provide electrical protection for technicians working on high-voltage EV systems and components.
108.3 Size: 900 mm X 900 mm
108.4 Thickness: 2.5 mm
108.5 Operating voltage: 1 000 V AC - 1 500 V DC
108.6 In accordance with IEC 61112:2009
108.7 Translucent flexible plastic material
108.8 Resistant to automotive fluids (oils, coolants, brake fluid), common cleaning solvents, battery electrolyte solutions
108.9 Provided in a storage bag

109 Clamps for Insulating Blanket

109.1 Basic Indicative Diagram

109.2 Insulating Clamp for Electrically Insulating Blankets fixation.
109.3 Compliant with DIN VDE 0680-1 standard.
109.4 Maximum operating voltage: 1000 V AC - 1500 V DC.
109.5 Material: Fiberglass-reinforced Nylon
109.6 Rubber Tips to prevent slippage and damage
109.7 Fully insulated

110 Insulated Rubber Mats

110.1 Basic Indicative Diagram

110.2 Manufactured as per IS 15652:2006

110.3 Thickness: Minimum 2.0 mm
110.4 Size: 1 meter X 1 meter
110.5 Anti slip pattern
110.6 Should withstand upto 3.3 kV

111 Arc Flash Suit: 12 Cal/Cm^2

111.1 Basic Indicative Diagram

111.2 Multi-layer Inherent arc flash Resistance Fabric
111.3 500 GSM.
111.4 Trouser should have provision of zipper closure.
111.5 Elasticized side waistband for a better fit and Comfort.
111.6 Sleeve cuffs should have adjustable straps with Velcro closure
111.7 Class E Helmet along with the 40-cal rated visor ASTM F 2178 -12 for high visibility
111.8 Fire Retardant Reflective tape applied across the shoulder, sleeves and bottom.

112 Gloves: Electrically Insulated

112.1 Basic Indicative Diagram

112.2 Class 0
112.3 Maximum AC Working Voltage - 1000 Volts
112.4 Proof Test AC Voltage - 5000 Volts
112.5 Withstand AC Voltage - 10000 Volts
112.6 Maximum Voltage DC - 1500 Volts
112.7 Powder-free
112.8 Low protein tested to avoid an allergic reaction to users
112.9 Gloves revalidation should be done as per IEC 60903-2014 after every 6 months.
112.10 Compliance to EN388:2016

113 Industrial/ Safety Shoes: Electrically Insulated

113.1 Basic Indicative Diagram

113.2 Type: Electrically Insulated Safety Shoes
113.3 Size: UK 7, UK 8 and UK 9 (Size to be confirmed from DVET)
113.4 Construction:
- 113.4.1 Upper: Full Grain Smooth Cow Leather
- 113.4.2 Lining: Breathable Sandwich Mesh
- 113.4.3 Insole: Super Memory Foam Insoles
- 113.4.4 Outsole: PU/Nitrile Rubber Injection (Slip Resistant)
- 113.4.5 Toecap: Composite Toe Cap
- 113.4.6 Penetration: Flexible Kevlar Midsole Plate

113.5 Tested as per EN 50321-1991 / ISO 20344 :2011
113.6 Certification: ISO: 20345:2011 & IS 15298
113.7 Electrical Shockproof Test @ 18 KVA for 1 Minute

114 Glove Inflator Kit

114.1 Basic Indicative Diagram

114.2 Portable Kit for visual inspection of gloves
114.3 Should be able to search abrasion, cuts, tears or punctures
114.4 Should be supplied with durable storage bag

115 Goggle: White Glass

115.1 Basic Indicative Diagram

115.2 Help provide limited impact protection from flying particles
115.3 Hard-coated polycarbonate lens offers 99% UV protection
115.4 Meets ANSI Z 87.1 standards
115.5 Lightweight, contemporary style
115.6 Adjustable temple
115.7 Eye protection against dust and impact
115.8 Universal size

116 Platform Trolley: 150 Kg

116.1 Basic Indicative Diagram

116.2 Material: Iron
116.3 Load Capacity: 150 Kg.
116.4 Castor Wheel: 4 Nos.
116.5 Castor Wheel Size: 200 mm diameter
116.6 Approx. Size:
- 116.6.1 Platform: 740 mm X 450 mm
- 116.6.2 Open Dimension: 740 mm X 450 mm X 900 mm
- 116.6.3 Folded Dimension: 740 mm X 450 mm X 270 mm

116.7 4-wheeled professional platform truck, folds and opens in second
116.8 Strong steel rigid handle for secure maneuvering of loads

117 Multimeter: Digital, 3 ½ Digit

117.1 Basic Indicative Diagram

117.2	Sensing:	True RMS
117.3	Display:	3-5/6 digits 6000 counts liquid crystal LCD display
117.4	Maximum Display:	5999 counts
117.5	Sampling Time:	About 3 times/ second
117.6	Operating Temperature:	0° C to 40° C, Relative Humidity < 80%

117.7	Measurement:	Double integral A/D conversion
117.8	Overrange Display:	'OL'
117.9	Automatic Polarity display	
117.10	Auto Power Off:	About 15 minutes when no signal
117.11	Low Battery Indication:	Below 2.3 V
117.12	Power Supply:	1.5V AAA X 2 battery
117.13	Backlight Display	
117.14	Pulse Output	
117.15	Data Hold	
117.16	Non-Contact Voltage Measurement (NCV)	
117.17	Flash Light	
117.18	MAX/MIN and Rel Zero	
117.19	DC Voltage	
	117.19.1 Ranges:	6 V, 60 V, 600 V, 1000 V
	117.19.2 Resolution:	0.00 1V to 1 V
	117.19.3 Accuracy:	± (0.5% rdg + 3dgts) for 6 V - 600 V
		± (0.8% rdg + 10dgts) for 1000 V
	117.19.4 Input Impedance:	10 MΩ
	117.19.5 Maximum input voltage:	750 VAC (RMS) or 1000 V DC
117.20	AC Voltage	
	117.20.1 Ranges:	6 V, 60 V, 600 V, 750 V
	117.20.2 Resolution:	0.001 V to 1 V
	117.20.3 Accuracy:	± (0.8% rdg + 3dgts) for 6 V-600 V
		± (1.2% rdg + 10dgts) for 750 V
	117.20.4 Input Impedance:	10 MΩ
	117.20.5 Frequency response:	40 Hz ~ 1 kHz (sine wave and triangular wave)
		40Hz ~ 200Hz (other waveforms)
117.21	DC Current	
	117.21.1 Ranges:	600 µA to 10 A
	117.21.2 Resolution:	0.1 µA to 0.01 A
	117.21.3 Accuracy:	± (1.2% rdg + 10 dgts) to ± (2.0% rdg + 30 dgts)
117.22	AC Current	
	117.22.1 Ranges:	600 µA to 10 A
	117.22.2 Resolution:	0.1 µA to 0.01 A
	117.22.3 Accuracy:	± (1.2% rdg + 10 dgts) to ± (2.0% rdg + 30 dgts)
117.23	Resistance	
	117.23.1 Ranges:	600 Ω to 40 MΩ
	117.23.2 Resolution:	0.1 Ω to 10 kΩ
	117.23.3 Accuracy:	± (0.8% rdg + 3 dgts) to ± (2.5% rdg + 3 dgts)
117.24	Capacitance	
	117.24.1 Ranges:	99.99 nF to 9.999 mF
	117.24.2 Resolution:	0.01 nF to 0.001 mF
	117.24.3 Accuracy:	± (3.5% rdg + 20 dgts) to ± (5.0% rdg + 3 dgts)
117.25	Frequency	
	117.25.1 Ranges:	10 Hz to 10 MHz
	117.25.2 Resolution:	0.01 Hz to 10 kHz
	117.25.3 Accuracy:	± (0.1% rdg + 3 dgts)
117.26	Additional Functions	
	117.26.1 Diode Test	
	117.26.2 Continuity Test	

117.27 Accessories:
- 117.27.1 Test Lead
- 117.27.2 User Manual
- 117.27.3 Required Batteries
- 117.27.4 Calibration Certificate

117.28 Plastic / Rexine/ Wooden Carrying Case with required cushioning

118 AC Current Digital Clamp Meter

118.1 Basic Indicative Diagram

118.2 Purpose: AC Current Digital Clampmeter is used for non-contact AC current measurement without circuit interruption in electrical maintenance, troubleshooting and installation applications.

118.3 Type: Non-contact AC Current Digital Clampmeter

118.4 Generally confirming to IS 15707:2006

118.5 Sensing: True RMS sensing

118.6 Display:
- 118.6.1 3-5/6 Digit 5999 counts backlight LCD display
- 118.6.2 Display size minimum 15 mm

118.7 Jaw:
- 118.7.1 Opening: maximum 42 mm
- 118.7.2 High permeability magnetic steel
- 118.7.3 Size of clamp: 7.5 mm
- 118.7.4 Self-centering jaw design
- 118.7.5 Spring-loaded automatic closure
- 118.7.6 Insulated jaw tips rated for measurement category

118.8 Full-range overload protection voltage: 1000V

118.9 Automatic range

118.10 The maximum input voltage at com and input end: AC 750V/ DC 1000V

118.11 Overrange display: OL or OL

118.12 Sampling time: About 3 time/second

118.13 Working Temperature: 0°C~40°C

118.14 Storage Temperature: -10°C~50°C

118.15 DC Voltage: 1mV ~ 1000V

118.16 AC Voltage: 0.01V ~ 750V

118.17 AC/DC Current: 0.1A ~ 1000A

118.18 Resistance: 1Ω ~ 60MΩ

118.19 Inrush Current: 1000A

118.20 Capacitance: 1nF ~ 60mF

118.21 Temperature: -20°C ~ 1000°C

118.22 Features:
- 118.22.1 Auto-off Indication: Power management status
- 118.22.2 Rotary switch for measurement mode selection
- 118.22.3 Manual range selection
- 118.22.4 Hold Button for Data hold/ freeze function
- 118.22.5 Backlight Button to display illumination control
- 118.22.6 Zero adjustment and relative measurement
- 118.22.7 Power Button: On/ off control

118.23 Construction Materials
- 118.23.1 High-impact ABS plastic with flame-retardant additives
- 118.23.2 Jaw Material: Laminated magnetic steel with insulation coating
- 118.23.3 Display Window: Scratch-resistant polycarbonate

118.24 Test Leads:
- 118.24.1 Wire: 14 AWG silicone insulation, 1000V rating
- 118.24.2 Probes: CAT III 1000V rated with safety sleeves
- 118.24.3 Length: 1.2m (4 feet) standard

118.25 Ergonomic Design
- 118.25.1 Contoured grip with non-slip texture
- 118.25.2 Optimized for one-hand operation
- 118.25.3 Single-hand jaw opening mechanism
- 118.25.4 Balanced design to minimize fatigue
- 118.25.5 Wrist strap attachment

118.26 Power: 9V battery

118.27 Accessories: Test leads, User's manual, Battery, Thermocouple and protective carry case with foam insert

119 Digital Continuity Tester

119.1 Basic Indicative Diagram

119.2 Purpose: Digital Continuity Tester is used to determine if an electrical path can be established between two points, i.e. if an electrical circuit can be made. It is used for High-volume production testing, Precision cable harness verification, PCB assembly continuity verification, Research and development applications and Automated test equipment integration

119.3 Type: Digital Type Continuity Tested

119.4 Generally Conforming to IS 15707:2006

119.5 Audible and optic continuity test

119.6 Audible and optic voltage check

119.7 Voltage protection: 600V

119.8 Robust and ergonomic housing

119.9 Continuity: 0.5~500kΩ
119.10 Test current: about 50μA
119.11 Test voltage: less than 9V
119.12 Voltage protection: 50~600V (AC/DC)
119.13 Construction Materials
- 119.13.1 High-impact ABS plastic with flame-retardant additives
- 119.13.2 Display Window: Scratch-resistant polycarbonate

119.14 Ergonomic Design
- 119.14.1 Contoured grip with non-slip texture
- 119.14.2 Optimized for one-hand operation
- 119.14.3 Single-hand jaw opening mechanism
- 119.14.4 Balanced design to minimize fatigue
- 119.14.5 Wrist strap attachment

119.15 Power: 9V battery
119.16 Safety standard: EN 61010-1 CAT III 600V , EN 61010-2-030, EN 61010-1
119.17 Accessories
- 119.17.1 Red and Black Kelvin clips and probes
- 119.17.2 Operation manual
- 119.17.3 Protective Carry case with foam inserts

120 Tyre Pressure Gauge with Holding Nipple

120.1 Basic Indicative Diagram

120.2 Easy change chuck system
120.3 1 button operation
120.4 Auto shut-off for increased battery life
120.5 Displays KgF, BAR, PSI, KPA measurements
120.6 Large face LCD digital read-out
120.7 Unit covered with rubber sleeve for extra comfort and durability
120.8 ON power Button, auto shut off in 90 seconds if not in use
120.9 LCD backlight
120.10 2-position lever - 1st position deflates, 2nd position inflates
120.11 With 21” hose and 2 AAA batteries

121 Measuring Steel Tape: 5 meter

121.1 Basic Indicative Diagram

121.2 Tape length: 5 meters
121.3 Tape width: 13 mm
121.4 Tapes coated with Epoxy based scratch guard material to ensure longer life
121.5 Bold & Easy to read printing
121.6 Ensures Class II Accuracy at 20 Degrees when subjected to tension of 50 Newton
121.7 Strong Copper Rivet to ensure stronger end hook

122 Soldering Iron Set: Mechanic Electric Vehicle

122.1 Soldering Set consists of following items as per below mentioned specification

S.N.	Name of Item	Qty
1	Temperature Controlled Soldering Station: 50 Watt, 230 Volt	2
2	Soldering Iron: 100 Watt, 230 Volt	4
3	Soldering Iron: 25 Watt, 12 V DC, Battery Operated	4
4	Soldering Tripod: PCB Holder and Clamp	2
5	Soldering Fume Extractor	2
6	Soldering Bit Set	2
7	Tweezer Set	2
8	Desoldering Pump	2
9	Solder Wire: 100 gm	2
10	Soldering Flux Cleaner: 10 ml	2
11	Soldering Flux Paste: 10 CC	2
12	Soldering Square Sponge	2
13	Soldering Tip Tinner: 20 gram	2
14	Desoldering Wick: 1.5 meter	2
	Total	**32**

122.2 Temperature Controlled Soldering Station: 50 Watt, 230 Volt

122.2.1 Basic Indicative Diagram

122.2.2 Digital temperature control with LED display (SET/RUN modes)
122.2.3 Sleep mode activates after 15 minutes of inactivity
122.2.4 ESD-safe design for sensitive electronics
122.2.5 Microcontroller-based temperature regulation

122.2.6 MCH solid-state heating element for fast heating and long life
122.2.7 Industrial-grade, heavy-duty construction
122.2.8 Input voltage: 230V AC, 50Hz
122.2.9 Output voltage (iron): 24V AC
122.2.10 Power consumption: 60 Watts (iron with station)
122.2.11 Temperature range: 200°C to 480°C (392°F to 896°F)
122.2.12 3-digit red LED digital display
122.2.13 Sleep mode for energy saving and bit life extension
122.2.14 Iron cable length: 1.35 meters
122.2.15 Source cable length: 1.35 meters
122.2.16 Needle bit (easy replaceable)
122.2.17 ABS body material
122.2.18 Earthed for safety
122.2.19 Quick heat-up (working temperature in ~13-15 seconds)
122.2.20 Rubber grip for non-slippery use
122.2.21 Easy-to-replace bits
122.2.22 Package Includes:

- Station
- Soldering Iron: 60 Watt, 240 Volt
- Stand

122.3 Soldering Iron: 100 Watt, 230 Volt
122.3.1 Basic Indicative Diagram

122.3.2 Input Voltage: 230V AC
122.3.3 Wattage: 100 Watt
122.3.4 Output Temperature: 280°C to 550°C
122.3.5 Output Power: 100 W
122.3.6 Wire: 3 Core
122.3.7 Wire lenght: minimum 1 meter
122.3.8 Bit Supplied
122.3.9 Tip Shape: Spade (Normal Spade Tip)
122.3.10 Plating: Nickel-plated
122.3.11 Tip Size: 6 mm
122.3.12 Material: Long-life premium grade
122.3.13 Replacement Method: Slide-on technology for easy tip replacement
122.3.14 Ergonomic shaped tri-grip handle

122.4 Soldering Iron - 25 Watt, 12 V DC, Battery Operated: Qty 2 Nos.
122.4.1 Basic Indicative Diagram

122.4.2 Input Voltage: 12V AC or DC

122.4.3 Power Consumption: 25 Watts
122.4.4 Current Rating: 2.1 Amps
122.4.5 Operating Temperature: 350°C (±10°C)
122.4.6 Wire: 2-core (with lugs at the end for easy battery connection)
122.4.7 Heat-up Time: Under 15 seconds
122.4.8 Connector Type: Spring-loaded connectors
122.4.9 Recommended Power Source: 12V automotive battery, power pack, or portable charger
122.4.10 Operates directly from 12V batteries (DC), making them suitable for true battery-powered use.
122.4.11 Fast heat-up (<15 seconds), allowing for quick deployment in the field.
122.4.12 Compact and easy to carry, designed for portability and flexibility.
122.4.13 Suitable to be used with automotive batteries

122.5 Soldering Tripod: PCB Holder and Clamp
122.5.1 Basic Indicative Diagram

122.5.2 Adjustable PCB Clamps
122.5.3 Securely holds PCBs of various sizes.
122.5.4 Adjustable arms provide flexibility for boards of different dimensions and shapes.
122.5.5 360° Rotation Mechanism
122.5.6 Rotatable clamps should allow access to both sides of the PCB without removing it from the holder.
122.5.7 Smooth rotation ensures seamless workflow.
122.5.8 Sturdy Tripod Base - Should Provide excellent stability during operation.
122.5.9 Heat-resistant to withstand high temperatures during soldering tasks.

122.6 Soldering Fume Extractor
122.6.1 Basic Indicative Diagram

122.6.2 Input Voltage: 230 V/ 50 Hz AC
122.6.3 Watts: 15 W
122.6.4 Fan Size: 4 X 4 Inches
122.6.5 Filter Material: Micro Fibre
122.6.6 Should have sufficient suction force for effective fume extraction
122.6.7 Should remove harmful soldering fumes and protect the user from

potential health risks associated with lead exposure and other toxic substances.

122.6.8 Should have a multi-stage filtration system for effective removal of various particulates and harmful chemicals from the soldering fumes.
- Moisture metal filter
- Pre-filter
- Activated carbon filter
- 3-micron cartridge filter

122.6.9 Should have an effective smoke removal, even from a distance of 8-12 inches

122.6.10 Should have quiet operation, allowing for focus on soldering work

122.6.11 Should have sturdy construction with minimal vibration

122.7 Soldering Bit Set

122.7.1 Basic Indicative Diagram

122.7.2 Should include the following shapes
- Fine needle bit
- Long-lasting needle bit
- Deluxe spade bit
- Conical bit
- Spade bit

122.7.3 These different shapes are designed to cater to various soldering tasks, providing versatility and precision for different applications.
- The needle bits should be ideal for fine, detailed work
- The spade bits offer a larger surface area for general soldering tasks.
- The conical bit provides a balance between precision and heat distribution, making it suitable for a range of soldering needs.

122.7.4 Each bit in this set should be durable and made of nickel or ceramic plating to enhances their longevity and heat conductivity.

122.8 Tweezer Set

122.8.1 Basic Indicative Diagram

122.8.2 5 various sizes and type of Tweezers

122.8.3 Should be ESD safe

122.8.4 Should be Non magnetic
122.8.5 Shapes: Standard Tip, Slim Tip, High Elasticity Tip, Round Tip, Pin Tip, Eagle Beak Tip
122.8.6 Material: Stainless steel
122.8.7 Should be supplied with cutter
122.8.8 Cutter and Tweezer should be in canvas pouch

122.9 Desoldering Pump
122.9.1 Basic Indicative Diagram

122.9.2 Should be used to remove heated solder from a PCB
122.9.3 Material: High grade aluminium for light weight and airtight function
122.9.4 Mechanism should be a piston which sucks air and solder from the tip at the press of a button.
122.9.5 High temperature resistant Teflon tip

122.10 Solder Wire: 100 gm
122.10.1 Basic Indicative Diagram

122.10.2 Grade: 60:40 (60% TIN and 40% LEAD)
122.10.3 Weight: 100 gms
122.10.4 Gauge: 18-20 swg
122.10.5 Should offer Minimum Resistance

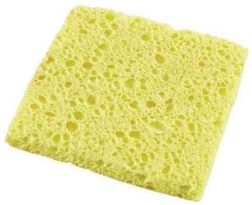
122.11 Soldering Flux Cleaner: 10 ml
122.11.1 Basic Indicative Diagram

122.11.2 Volume: 10 ml
122.11.3 Type: Spray-on flux remover
122.11.4 Should be suitable for all types of flux residues.
122.11.5 Dry Time: under 2 minutes.
122.11.6 Should meet industry standards for electronics cleaning products.

122.12 Soldering Flux Paste: 10 CC
122.12.1 Basic Indicative Diagram

122.12.2 Type of flux: Rasin based
122.12.3 Lead Free
122.12.4 Appearance: Paste or Gel
122.12.5 Syringe type package
122.12.6 Capacity: 10 CC
122.12.7 Can be washed down with alcohol based agents

122.13 Soldering Square Sponge
122.13.1 Basic Indicative Diagram



122.13.2 Material Cellulose
122.13.3 Size: 50mm X 50mm (approx.)
122.13.4 Should be used Wiping the tip of the soldering bit (when hot) to clean the residue

122.14 Soldering Tip Tinner: 20 gram
122.14.1 Basic Indicative Diagram

122.14.2 Combination of mild acid and solder powder
122.14.3 Should effectively remove oxide build-up and residue from soldering tips
122.14.4 Should maintain tips protective layer of solder
122.14.5 Should ensure tip can accept solder and transfer heat efficiently

122.15 Desoldering Wick: 1.5 meter
122.15.1 Basic Indicative Diagram

122.15.2 Length: 1.5 meter
122.15.3 Width: 1.85 mm
122.15.4 Material: 100% Copper

122.15.5 Thickness: Comfortable for Desoldering

122.15.6 Should be useful for:

- Removing faulty components from circuit boards
- Correcting solder bridging issues
- Cleaning up excess solder on PCB pads and connections
- General tidying of solder areas or joints

123 Annexure A: Furniture Manufacturing Process

The manufacturing processes given are generalized. Need to consider wherever it is applicable as per the specification of the product):

123.1 Raw materials (Wood working): 1) Plain Particle Board (PPB), 2) Medium Density Fibre Board (MDF), 3) Pre-laminate Board (PLB), 4) Decorative Laminate (DL), 5) Fabric and 6) Lipping (PVC lipping).

Process (Wood working): MDF board from approved supplier -> Wood Cutting (cutting from mother board 600 mm X 2400 mm sheet to the desired size on Panel saw machine with no sharp edges, no glue marks, no scratches, no machine marks and no cracks at drill hole) -> Lamination (Hot lamination adhering Decorative laminate to MDF board using approved make adhesive) -> Sizing/ Routing (fine sizing and setting curvilinear shapes) -> Lipping/ Edge banding (adhering PVC lipping on MDF board using hot melt glue under heat and pressure) -> Finishing -> Assembly and Packaging (car case/ panel assembly, final inspection/ correction if required, packing and dispatch).

123.2 Raw materials (Wood working): 1) BWP-grade plywood, 2) MR grade plywood, 3) Commercial plywood, 4) Decorative Laminate (DL) and 5) Lipping.

Process (Wood working): Ply wood from approved supplier -> Wood Cutting: Cutting plywood sheets (for e.g. 1220 mm x 2440 mm) to the desired size on a panel saw machine. Ensure no sharp edges, glue marks, scratches, machine marks, or cracks at drill holes. -> Lamination: Adhering decorative laminate to the BWP plywood surface using an approved make adhesive. Perform lamination under heat and pressure using a hot press to ensure uniform bonding. -> Sizing/ Routing: Fine sizing and shaping to meet design specifications, including curvilinear or intricate shapes, using routers or trimmers. -> Lipping/ Edge Banding: Applying PVC lipping or edge bands to exposed edges using hot melt glue under heat and pressure. Ensure the edges are smooth, seamless, and well-finished. -> Finishing: Sanding and polishing edges and surfaces to achieve a professional look. -> Assembly and Packaging: Assembling panels or carcasses as per design requirements. -> Final inspection for quality assurance and corrections if needed. -> Packing the finished product using protective materials (e.g., foam sheets or corrugated boxes) for safe dispatch.

123.3 Raw materials (Metal working): 1) Stainless Steel (Nickel and Chromium added to prevent steel from rusting), 2) Mild steel and 3) Epoxy polyester powder (for powder coating).

Process (Metal working): CRCA sheet from approved supplier -> Notching (cutting at the edge and punching holes, shearing, turret punching/ press operation, deburring of punched sheet) -> Metal forming (blending for the purpose of different applications, sheet bending) -> Assembly/ Sub-Assembly (for welded all components get assembled and for knock down sub-assembly takes place. CO2 welding and spot welding is done) -> Pre-treatment (8 step process including anti-rust surface treatment) -> Powder coating (surface coating applied in the form of powder and on curing produces a protective coating, examination of test coating specimen for blisters, flaking and corrosion) -> Assembly and Packaging (car case/ panel assembly, final inspection/ correction if required, packing and dispatch).

123.4 Raw materials (Metal working): 1) Aluminium Extrusion.

Process (Metal working): Aluminium Extrusion from approved supplier -> Cutting of Aluminium extrusions to desired size -> Assembly and Packaging (car case/ panel assembly, final inspection/ correction if required, packing and dispatch).

123.5 In-house CNC Laser cutting machines should be used for cutting sheet-metal as well as tubular parts.

123.6 All plastic components to be made up of ABS/ Nylon/ Glass-filled Nylon and should

be in-house moulded on a fully automatic CNC controlled vertical injection moulding machine. Plastic parts should not have visible sink marks, warpage, flash, discoloration, blow holes, ejector marks or any other defect.

123.7 The item should be manufactured with proper in-house tooling, jigs, dies and fixtures to ensure uniformity and standardization in all parts.

123.8 The item should have interchangeability of all components to ensure free availability and fixing/ replacement of any part of the structure over 5 years.

123.9 All sheet-metal shearing, bending and folding operations to be carried out on in-house press brakes, hydraulic presses and shearing machines/ iron workers.

123.10 In-house MIG welding for clean and full-strength welds and a play-free structure. All welded edges should be machine finished (through grinders or polishing instrument).

123.11 All edges, corners and joints of the steel frame and the accessories tray should be chip free and properly chamfered/ rounded.

123.12 The structure and the accessories tray should be epoxy polyester powder coated in an in-house powder coating facility with standard pre-treatment procedure.

123.13 The manufacturing processes given are generalized. Need to consider wherever it is applicable as per the Specifications of the product.

123.14 All raw materials for manufacturing process shall be as per relevant IS code.

124 Onsite Installation, Training Requirement and Warranty

124.1 The items supplied by the Supplier shall require onsite assembly and installation if supplied in disassembled form or is case of heavy machinery that requires installation for its working.

124.2 Supplier shall provide adequate Fitting Accessories (If required) in case the Onsite Installation is not required.

124.3 However, for items as hand tools, equipment, assembled furniture, plug and play type items i.e. which do not require onsite assembly and/ or installation shall be supplied by the Supplier to the consignee address.

124.4 Supplier shall provide Training to the user either at Onsite or at mutually agreed centralized location.

124.5 The items offered by the bidders shall be warranted from the date of acceptance of the goods after receipt and/ or installation at site.

124.6 The warranty shall be applicable against manufacturing defects.

124.7 The warranty shall be offered by OEM.

S.N.	Name of Item	Onsite Delivery*	Onsite Installation	Training		Warranty
				Onsite #	Centralized @	
1	Steel Rule: 300 mm, Graduated both in Metric and English Unit	Yes	No	No	No	1 Year
2	Steel Rule: 600 mm, Graduated both in Metric and English Unit	Yes	No	No	No	1 Year
3	Gloves: Rubber	Yes	No	No	No	1 Year
4	Industrial/ Safety Shoes	Yes	No	No	No	1 Year
5	Industrial Helmet	Yes	No	No	No	1 Year
6	V Block: 75 X 75 X 50 mm with Clamp	Yes	No	No	No	1 Year
7	V Block: 150 x 100 x 75 mm with Clamp	Yes	No	No	No	1 Year
8	Micrometer: Outside, 0 mm to 25 mm, LC = 0.01 mm	Yes	No	No	No	1 Year
9	Micrometer: Outside, 25 mm to 50 mm, LC = 0.01 mm	Yes	No	No	No	1 Year
10	Vernier Caliper: 0 mm to 180 mm, LC = 0.02 mm with fine adjustment	Yes	No	No	No	1 Year
11	Micrometer: Inside, 5 mm to 30 mm	Yes	No	No	No	1 Year
12	Engineer's Square: 150 mm Blade	Yes	No	No	No	1 Year
13	Engineer's Square: 300 mm Blade	Yes	No	No	No	1 Year
14	Angle Plate: Adjustable, 250 X 250 X 300 mm	Yes	No	No	No	1 Year
15	Spirit Level: 150 mm	Yes	No	No	No	1 Year
16	File: Warding, Smooth, 150 mm with Handle	Yes	No	No	No	1 Year

S.N.	Name of Item	Onsite Delivery*	Onsite Installation	Training		Warranty
				Onsite #	Centralized @	
17	File: Knife Edge, 150 mm with Handle	Yes	No	No	No	1 Year
18	File: Cant Saw, Smooth, 150 mm with Handle	Yes	No	No	No	1 Year
19	File: Feather Edge, 150 mm	Yes	No	No	No	1 Year
20	File: Triangular, Smooth, 150 mm with Handle	Yes	No	No	No	1 Year
21	File: Round, Second Cut, 200 mm with Handle	Yes	No	No	No	1 Year
22	File: Square, Second Cut, 150 mm with Handle	Yes	No	No	No	1 Year
23	File: Square, Second Cut, 250 mm with Handle	Yes	No	No	No	1 Year
24	File: Triangular, Second Cut, 200 mm with Handle	Yes	No	No	No	1 Year
25	File: Flat, Second Cut, 250 mm with Handle	Yes	No	No	No	1 Year
26	File: Flat, Bastard, 200 mm with Handle	Yes	No	No	No	1 Year
27	File: Flat, Bastard, 300 mm with Handle	Yes	No	No	No	1 Year
28	File Set: Needle, 160 mm, Set of 12	Yes	No	No	No	1 Year
29	File: Half Round, Second Cut, 250 mm with Handle	Yes	No	No	No	1 Year
30	File: Flat, Bastard, 250 mm with Handle	Yes	No	No	No	1 Year
31	File: Round, Bastard, 250 mm with Handle	Yes	No	No	No	1 Year
32	File: Flat, Second Cut, 150 mm with Handle	Yes	No	No	No	1 Year
33	File: Car Body, Bastard Cut without Tang, 300 mm with Handle	Yes	No	No	No	1 Year
34	Oil Stone: 150 mm X 50 mm X 25 mm	Yes	No	No	No	1 Year
35	Plier: Combination, 200 mm	Yes	No	No	No	1 Year
36	Blow Lamp: 0.5 Liter	Yes	No	No	No	1 Year
37	Spanner Set: Double Ended, 6 mm to 32 mm, Set of 12	Yes	No	No	No	1 Year
38	Spanner: Adjustable, 150 mm	Yes	No	No	No	1 Year
39	Spanner Set: Box Type, 6 mm to 32 mm, Set of 12	Yes	No	No	No	1 Year
40	Magnifying Glass: 75 mm	Yes	No	No	No	1 Year
41	Clamp: Toolmaker, 50 mm	Yes	No	No	No	1 Year
42	Clamp: Toolmaker, 75 mm	Yes	No	No	No	1 Year
43	Clamp: C, 50 mm	Yes	No	No	No	1 Year

S.N.	Name of Item	Onsite Delivery*	Onsite Installation	Training		Warranty
				Onsite #	Centralized @	
44	Clamp: C, 100 mm	Yes	No	No	No	1 Year
45	Scraper Set: 200 mm, Triangular, Half Round and Flat	Yes	No	No	No	1 Year
46	Chisel: Diamond Point, 9 mm X 150 mm	Yes	No	No	No	1 Year
47	Chisel: Cold, 20 mm X 150 mm	Yes	No	No	No	1 Year
48	Chisel: Cold, Round Nose, 9 mm X 100 mm	Yes	No	No	No	1 Year
49	Motorized Tenon Saw	Yes	No	No	No	1 Year
50	Hammer: Ball Peen, 800 grams with Handle	Yes	No	No	No	1 Year
51	Hacksaw Frame: Adjustable, 250 mm to 300 mm	Yes	No	No	No	1 Year
52	Hacksaw Blade: Length = 300 mm, Width = 12.5 mm, Thickness = 0.63 mm, TPI = 18, Low Alloy, Packet of 100 Blades	Yes	No	No	No	1 Year
53	Hammer: Nylon, 30 mm with Handle	Yes	No	No	No	1 Year
54	Precision Screw Driver: Set of 6	Yes	No	No	No	1 Year
55	Screw Driver: Insulated, 10 X 250 mm	Yes	No	No	No	1 Year
56	Screw Driver: Insulated, 4 X 150 mm	Yes	No	No	No	1 Year
57	Screw Driver: Insulated, 6 X 150 mm	Yes	No	No	No	1 Year
58	Screw Driver: Insulated, 8 X 200 mm	Yes	No	No	No	1 Year
59	Screw Driver: Insulated, 8 X 300 mm	Yes	No	No	No	1 Year
60	Screw Driver: Philips, Set of 5	Yes	No	No	No	1 Year
61	Neon Tester: 500 V	Yes	No	No	No	1 Year
62	Portable Electric Impact Drill Machine	Yes	No	No	No	1 Year
63	Metal Cut-Off Circular Saw: Floor Standing	Yes	No	No	No	1 Year
64	Portable Electric Hand Grinder: Straight	Yes	No	No	No	1 Year
65	Portable Electric Air Blower	Yes	No	No	No	1 Year
66	Portable Electric Jigsaw	Yes	No	No	No	1 Year
67	Portable Electric Random Orbital Sander	Yes	No	No	No	1 Year

S.N.	Name of Item	Onsite Delivery*	Onsite Installation	Training		Warranty
				Onsite #	Centralized @	
68	Torque Wrench: Digital, 20 Nm to 280 Nm	Yes	No	No	No	1 Year
69	Lifting Tackle/ Sling: 1 Ton, 2 meters	Yes	No	No	No	1 Year
70	Air impact Wrench with Impact Sockets	Yes	Yes	Yes	No	1 Year
71	Laser Light Pen: Green	Yes	No	No	No	1 Year
72	Surface Plate: Cast Iron, 600 X 600 mm with Stand and Cover	Yes	No	No	No	1 Year
73	Screw Pitch Gauge Set: Metric and British, 0.25 to 6 mm, 21 Leaves	Yes	No	No	No	1 Year
74	Laser Distance Measuring Instrument	Yes	No	No	No	1 Year
75	Palm Scale: Table Top, 1000gm	Yes	No	No	No	1 Year
76	Allen Key Set: Hexagonal, 1.5 mm to 10 mm, Set of 9	Yes	No	No	No	1 Year
77	Universal Quick Adjustable Multi-function Wrench Spanner Set	Yes	No	No	No	1 Year
78	1/2 Inch Socket Set	Yes	No	No	No	1 Year
79	Two Post Car Lift: Capacity 4 Ton, Electric Operated	Yes	Yes	Yes	No	1 Year
80	Two Wheeler Scooter Assembly Set	Yes	Yes	Yes	No	1 Year
81	Transmission Gearbox Trainer	Yes	Yes	Yes	No	1 Year
82	Demonstration Board: Electric Vehicle Cooling System	Yes	Yes	Yes	No	1 Year
83	Mini Commercial Electric Vehicle Chassis	Yes	Yes	Yes	No	1 Year
84	Engine and Transmission System for Electric Vehicle	Yes	Yes	Yes	No	1 Year
85	Cut Section of Electric Vehicle Motors	Yes	Yes	Yes	No	1 Year
86	HVAC Trainer	Yes	Yes	Yes	No	1 Year
87	Multifunction Installation Tester	Yes	Yes	Yes	No	1 Year
88	Electric Vehicle Service Equipment Test Adapter Kit	Yes	Yes	Yes	No	1 Year
89	AC EV Charger Setup	Yes	Yes	Yes	No	1 Year
90	Battery Tester with inbuilt printer	Yes	Yes	Yes	No	1 Year
91	Lighting and Wiring System for Electric Vehicle	Yes	Yes	Yes	No	1 Year
92	Instructor/ Office Chair: Non-Revolving, Mid Back, Mesh	Yes	Yes	No	No	1 Year

S.N.	Name of Item	Onsite Delivery*	Onsite Installation	Training		Warranty
				Onsite #	Centralized @	
93	Instructor/ Office Table	Yes	Yes	No	No	1 Year
94	Green Board: 4 X 6 Feet	Yes	Yes	No	No	1 Year
95	Stool: Height 600 mm	Yes	Yes	No	No	1 Year
96	Working Table: 8 (L) X 4 (W) X 3 (H) Feet, Wooden Top	Yes	Yes	No	No	1 Year
97	Steel Cupboard: Large	Yes	Yes	No	No	1 Year
98	Steel Book Case	Yes	Yes	No	No	1 Year
99	7 Drawer Tool Trolley: W:D:H = 700:450:900, ± 25 mm	Yes	No	No	No	1 Year
100	5 Tray Cantilever Tool Box: W:D:H = 450:200:200, ± 20 mm	Yes	No	No	No	1 Year
101	Dummy/ Mannequins: Male, Fiber	Yes	No	No	No	1 Year
102	Mobile Lockable Shoe Rack: 24 Pair	Yes	Yes	No	No	1 Year
103	Three wheeler Electric Rickshaw	Yes	Yes	Yes	No	1 Year
104	Four wheeler Buggy (Golf Cart)	Yes	Yes	Yes	No	1 Year
105	Electric Vehicle Diagnostic Scanner	Yes	Yes	Yes	No	1 Year
106	Solar based Charging System	Yes	No	Yes	No	1 Year
107	Electric Vehicle Tool Kit	Yes	No	No	No	1 Year
108	Electrically Insulating Blanket	Yes	No	No	No	1 Year
109	Clamps for Insulating Blanket	Yes	No	No	No	1 Year
110	Insulated Rubber Mats	Yes	No	No	No	1 Year
111	Arc Flash Suit: 12 Cal/Cm2	Yes	No	No	No	1 Year
112	Gloves: Electrically Insulated	Yes	No	No	No	1 Year
113	Industrial/ Safety Shoes: Electrically Insulated	Yes	No	No	No	1 Year
114	Glove Inflator Kit	Yes	No	No	No	1 Year
115	Goggle: White Glass	Yes	No	No	No	NA
116	Platform Trolley: 150 Kg	Yes	No	No	No	1 Year
117	Multimeter: Digital, 3 ½ Digit	Yes	No	No	No	1 Year
118	AC Current Digital Clamp Meter	Yes	No	No	No	1 Year
119	Digital Continuity Tester	Yes	No	No	No	1 Year
120	Tyre Pressure Gauge with Holding Nipple	Yes	Yes	Yes	No	1 Year
121	Measuring Steel Tape: 5 meter	Yes	No	No	No	1 Year
122	Soldering Iron Set: Mechanic Electric Vehicle	Yes	No	No	No	1 Year

* *Onsite Assembly required only in case the item is supplied in disassembled form.*

 # Onsite Training to be provided to individual consignee

@ Centralized Training to be provided by the Supplier at its location or any suitable place mutually decided by Supplier and Directorate. Supplier shall bear the training cost and Consignee shall bear the cost of Travelling and Duty Allowances for its staff deputed for the training.

125 Special Terms and Conditions

125.1 The product offered must match the specifications mentioned in the specification sheet. Better and Higher Specifications and Positive deviations will be accepted. All other parameters must generally conform to the stated standards (IS or equivalent international standards) .

125.2 The Basic Indicative Images/ Diagram and Reference Brands are only indicative of the required product. They are given only for understanding the product and may not match all required specifications of the product. The manufacturer has to supply the product as per technical specifications mentioned and not as per the indicative diagram and/or Reference Brand/ Model.

125.3 Any item not forming part of this but as required for installation of the item, the same shall be supplied free of cost by the manufacturer.

125.4 **After Sales Service:** Manufacturer/ OEM/ Bidder should have their after sales service set-up in the state of Maharashtra operational since last 5 years. Manufacturer/ OEM should also give a confirmation that after sales and service support and availability of spares will be available for at least 5 years after the initial warranty period is over (On Chargeable Basis) .

125.5 Operating manual must be supplied with each product.

125.6 DVET may ask for a sample of specific product offered by the supplier after issue of purchase order; which shall be submitted within 7 days on such request; and carry out inspection and tests by its experts or from any Government approved labs. All costs related to inspection and tests in Government approved labs shall be borne by the supplier. If any destructive test is carried out, the sample will not be returned to the supplier.

125.7 Manufacturer/ OEM must provide certificate on Manufacturer/ OEM letterhead regarding genuineness, quality and compliance of the goods as per specifications laid down in the purchase order.

126 Bill of Quantity (BoQ) per Trade

S.N.	Name of Item	Qty
1	Steel Rule: 300 mm, Graduated both in Metric and English Unit	24
2	Steel Rule: 600 mm, Graduated both in Metric and English Unit	24
3	Gloves: Rubber	24
4	Industrial/ Safety Shoes	24
5	Industrial Helmet	24
6	V Block: 75 X 75 X 50 mm with Clamp	4
7	V Block: 150 x 100 x 75 mm with Clamp	4
8	Micrometer: Outside, 0 mm to 25 mm, LC = 0.01 mm	2
9	Micrometer: Outside, 25 mm to 50 mm, LC = 0.01 mm	2
10	Vernier Caliper: 0 mm to 180 mm, LC = 0.02 mm with fine adjustment	2
11	Micrometer: Inside, 5 mm to 30 mm	2
12	Engineer's Square: 150 mm Blade	2
13	Engineer's Square: 300 mm Blade	2
14	Angle Plate: Adjustable, 250 X 250 X 300 mm	2
15	Spirit Level: 150 mm	4
16	File: Warding, Smooth, 150 mm with Handle	4
17	File: Knife Edge, 150 mm with Handle	4
18	File: Cant Saw, Smooth, 150 mm with Handle	4
19	File: Feather Edge, 150 mm	4
20	File: Triangular, Smooth, 150 mm with Handle	4
21	File: Round, Second Cut, 200 mm with Handle	4
22	File: Square, Second Cut, 150 mm with Handle	4
23	File: Square, Second Cut, 250 mm with Handle	4
24	File: Triangular, Second Cut, 200 mm with Handle	4
25	File: Flat, Second Cut, 250 mm with Handle	4
26	File: Flat, Bastard, 200 mm with Handle	4
27	File: Flat, Bastard, 300 mm with Handle	4
28	File Set: Needle, 160 mm, Set of 12	4
29	File: Half Round, Second Cut, 250 mm with Handle	4
30	File: Flat, Bastard, 250 mm with Handle	4
31	File: Round, Bastard, 250 mm with Handle	4
32	File: Flat, Second Cut, 150 mm with Handle	4
33	File: Car Body, Bastard Cut without Tang, 300 mm with Handle	4
34	Oil Stone: 150 mm X 50 mm X 25 mm	2
35	Plier: Combination, 200 mm	4
36	Blow Lamp: 0.5 Liter	2
37	Spanner Set: Double Ended, 6 mm to 32 mm, Set of 12	4
38	Spanner: Adjustable, 150 mm	4
39	Spanner Set: Box Type, 6 mm to 32 mm, Set of 12	4
40	Magnifying Glass: 75 mm	4
41	Clamp: Toolmaker, 50 mm	4
42	Clamp: Toolmaker, 75 mm	4
43	Clamp: C, 50 mm	4
44	Clamp: C, 100 mm	4
45	Scraper Set: 200 mm, Triangular, Half Round and Flat	4
46	Chisel: Diamond Point, 9 mm X 150 mm	4

S.N.	Name of Item	Qty
47	Chisel: Cold, 20 mm X 150 mm	4
48	Chisel: Cold, Round Nose, 9 mm X 100 mm	4
49	Motorized Tenon Saw	1
50	Hammer: Ball Peen, 800 grams with Handle	4
51	Hacksaw Frame: Adjustable, 250 mm to 300 mm	4
52	Hacksaw Blade: Length = 300 mm, Width = 12.5 mm, Thickness = 0.63 mm, TPI = 18, Low Alloy, Packet of 100 Blades	1
53	Hammer: Nylon, 30 mm with Handle	4
54	Precision Screw Driver: Set of 6	4
55	Screw Driver: Insulated, 10 X 250 mm	4
56	Screw Driver: Insulated, 4 X 150 mm	4
57	Screw Driver: Insulated, 6 X 150 mm	4
58	Screw Driver: Insulated, 8 X 200 mm	4
59	Screw Driver: Insulated, 8 X 300 mm	4
60	Screw Driver: Philips, Set of 5	4
61	Neon Tester: 500 V	4
62	Portable Electric Impact Drill Machine	1
63	Metal Cut-Off Circular Saw: Floor Standing	1
64	Portable Electric Hand Grinder: Straight	1
65	Portable Electric Air Blower	1
66	Portable Electric Jigsaw	1
67	Portable Electric Random Orbital Sander	1
68	Torque Wrench: Digital, 20 Nm to 280 Nm	2
69	Lifting Tackle/ Sling: 1 Ton, 2 meters	4
70	Air impact Wrench with Impact Sockets	2
71	Laser Light Pen: Green	2
72	Surface Plate: Cast Iron, 600 x 600 mm with Stand and Cover	1
73	Screw Pitch Gauge Set: Metric and British, 0.25 to 6 mm, 21 Leaves	2
74	Laser Distance Measuring Instrument	1
75	Palm Scale: Table Top, 1000gm	1
76	Allen Key Set: Hexagonal, 1.5 mm to 10 mm, Set of 9	4
77	Universal Quick Adjustable Multi-function Wrench Spanner Set	4
78	1/2 Inch Socket Set	2
79	Two Post Car Lift: Capacity 4 Ton, Electric Operated	1
80	Two Wheeler Scooter Assembly Set	1
81	Transmission Gearbox Trainer	1
82	Demonstration Board: Electric Vehicle Cooling System	1
83	Mini Commercial Electric Vehicle Chassis	1
84	Engine and Transmission System for Electric Vehicle	1
85	Cut Section of Electric Vehicle Motors	1
86	HVAC Trainer	1
87	Multifunction Installation Tester	1
88	Electric Vehicle Service Equipment Test Adapter Kit	1
89	AC EV Charger Setup	1
90	Battery Tester with inbuilt printer	1
91	Lighting and Wiring System for Electric Vehicle	1
92	Instructor/ Office Chair: Non-Revolving, Mid Back, Mesh	1
93	Instructor/ Office Table	1

S.N.	Name of Item	Qty
94	Green Board: 4 X 6 Feet	1
95	Stool: Height 600 mm	24
96	Working Table: 8 (L) X 4 (W) X 3 (H) Feet, Wooden Top	2
97	Steel Cupboard: Large	2
98	Steel Book Case	1
99	7 Drawer Tool Trolley: W:D:H = 700:450:900, ± 25 mm	1
100	5 Tray Cantilever Tool Box: W:D:H = 450:200:200, ± 20 mm	2
101	Dummy/ Mannequins: Male, Fiber	1
102	Mobile Lockable Shoe Rack: 24 Pair	1
103	Three wheeler Electric Rickshaw	1
104	Four wheeler Buggy (Golf Cart)	1
105	Electric Vehicle Diagnostic Scanner	1
106	Solar based Charging System	1
107	Electric Vehicle Tool Kit	1
108	Electrically Insulating Blanket	2
109	Clamps for Insulating Blanket	6
110	Insulated Rubber Mats	2
111	Arc Flash Suit: 12 Cal/Cm2	2
112	Gloves: Electrically Insulated	2
113	Industrial/ Safety Shoes: Electrically Insulated	2
114	Glove Inflator Kit	1
115	Goggle: White Glass	24
116	Platform Trolley: 150 Kg	1
117	Multimeter: Digital, 3 ½ Digit	4
118	AC Current Digital Clamp Meter	2
119	Digital Continuity Tester	2
120	Tyre Pressure Gauge with Holding Nipple	1
121	Measuring Steel Tape: 5 meter	2
122	Soldering Iron Set: Mechanic Electric Vehicle	1
	Total	**460**

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Annexure B: Consignee wise Quantity of Items

S.N.	Institute Code	Name of ITI	Region	Qty*
1	GR27000303	GOVT. ITI, ACHALPUR, TALUKA: ACHALPUR, DISTRICT: AMRAVATI	AMRAVATI	1
2	GR27000352	GOVT. ITI, DARYAPUR, TALUKA: DARYAPUR, DISTRICT: AMRAVATI	AMRAVATI	1
3	GR27000509	GOVT. ITI, WARUD, TALUKA: WARUD, DISTRICT: AMRAVATI	AMRAVATI	1
4	GU27000031	GOVT. ITI, BEED, TALUKA: BEED, DISTRICT: BEED	CHH. SAMBHAJINAGAR	1
5	GR27000173	GOVT. ITI, MUL, TALUKA: MUL, DISTRICT: CHANDRAPUR	NAGPUR	1
6	GU27000028	GOVT. ITI, GONDIA, TALUKA: GONDIA, DISTRICT: GONDIA	NAGPUR	1
7	GR27000131	GOVT. ITI, UMRED, TALUKA: UMRED, DISTRICT: NAGPUR	NAGPUR	1
8	GR27000512	GOVT. ITI, SELU, TALUKA: SELU, DISTRICT: WARDHA	NAGPUR	1
9	GR27000423	GOVT. ITI, PATHARDI, TALUKA: PATHARDI, DISTRICT: AHMEDNAGAR	NASHIK	1
				9

* Quantity represents total **Training Setup** that includes all items with required quantities as per **Bill of Quantity (BoQ) per Trade** mentioned in **Annexure A: Technical Specification of Items**