





MSME-TECHNOLOGY DEVELOPMENT CENTRE (PROCESS AND PRODUCT DEVELOPMENT CENTRE, AGRA)

Ministry of MSME, Govt. of India Foundry Nagar, Agra Ph: 0562-2344006, 2344673, Fax: - 0562-2344381 Email: info@ppdcagra.in

TENDER NOTICE (E-Tender)

The tenders are invited under double bids system from interested manufacturer/Suppliers/Dealersfor procurement of machinery/ equipment for the Institute.

The details of specifications, tender document, EMD etc, can be downloaded from central Public Procurement Portal (www.eprocure.gov.in/eprocure/app) & www.eprocure.gov.in. The last date of submission is 24.07.2021 by 12:00 P.M and to be opened on 26.07.2021 at 2:00 P.M at PPDC-Agra.

PRINCIPAL DIRECTOR

MSME-TECHNOLOGY DEVELOPMENT CENTRE

(Process & Product Development Centre) **Govt. of India Organization**Under

Ministry of Micro Small and Medium Enterprises

Foundry Nagar, Agra - 282006

NOTICE INVITING e-TENDER

MSME - Technology Development Centre, Ministry of MSME, Government of India, invites online bids under two bid systems (i.e. Technical e-Bid and Financial e-Bid) for supply of Machinery Items. The e-Bid shall be submitted online on www.eprocure.gov.in. The Tender is available on www.ppdcagra.dcmsme.gov.in. No hard copy of Bids shall be accepted in the office. All prospective Bidders may visit www.eprocure.gov.in. (Bidder's manual kit) before online submission of e-Bid.

TERMS AND CONDITIONS:

1. GENERAL

MSME- Technology Development Centre (PPDC), Agra, invites e-bids under Two Bid systems (Technical and Financial Bid) from Reputed Machinery Suppliers.

2. DETAILS OF e-BID:

| Sr. No. | Particulars | Details | |
|---------|--|--|--|
| 1. | Bid Reference | E-Tender No. PPDC/Machinery Items/2021-22 | |
| 2. | Last Date and Time of receipt of Bid | 24 th Jul 2021 by 12:00 PM | |
| 3. | Date and Time for opening of Technical | 26 th Jul 2021 by 2:00 PM | |
| | Bid | | |
| 4. | Place of receiving the bid / | MSME-Technology Development Centre, (PPDC) | |
| | communication | Foundry Nagar, Agra-282006 | |
| 5. | EMD | Rs 170,000/- for IoT and Automation Lab Equipment | |
| | | (Account Payee Demand Draft / Bankers Cheque) in | |
| | | favour of "Principal Director", PPDC, Agra | |
| 6. | Financial bid opening | Will be opened on same day on 26 th Jul 2021, after | |
| | | evaluation of Technical Bids. | |
| 7. | Tender Fee | Rs. 1000/- Non-Refundable (Account Payee Demand | |
| | | Draft / Bankers Cheque) in favour of | |
| | | "Principal Director", PPDC, Agra | |

3. SUBMISSION OF e-BIDS:

- a) E-Bids are invited in two Bid System. (1) Technical and (2) Financial and shall be submitted electronically (online) on www.eprocure.gov.in for supply of Machinery Items.
- b) E-Bids shall be submitted on or before last date 24th Jul 2021. No Hard Copy of Bids will be accepted.
- c) EMD of each Machinery Item given in the list of Machinery with Specification. in form of account Payee Demand Draft, Bankers Cheque in favor of "Principal Director", PPDC, Agra, payable at Agra, shall be submitted in the office **before last date and time of submission**. The e-bids will be opened only those who have submitted EMD's on or before the schedule date and time. Technical e-Bids of all the received tender will be opened on pre scheduled date, time & venue.

4. ELIGIBILTY / QUALIFICATION CRITERIA FOR TECHNICAL BID

- 1. The Bidders shall have supplied similar type of goods/instrument/machines to any Govt. / Autonomous/reputed organizations. Recent Purchase orders are to be enclosed.
- 2. Tender fees & EMD as stated above shall be submitted. If those claim for Exemption should be provide Valid MSME / NSIC Certificate Relevant to Product to be apply.
- 3. All the bids will be evaluated purely on the basis of technical ground/ technical compliance statement by bidder, acceptance of payment terms, delivery terms, PBG clause, guarantee/ warranty clause, Training, Installation, calibration certification/ documentation, Inspection clauses check list & any Govt. policies/guidelines as & when applicable. The price/financial bids of only technically qualified/accepted bidders will be opened.
- Country of Origin of Product apart from India, decision of acceptance of bid will be taken as per GFR guideline. Bidders should enclose the country of Origin certificate along with Tender documents.

GENERAL CONDITIONS/INSTRUCTIONS:

- Bidders are advised to read & study the complete Tender documents carefully. Submission of
 Tender shall be deemed that bidder has read and understood all the terms & conditions of the
 tender and its implications and agrees and binds himself/themselves to the same. All pages of
 tenders should be signed by bidder and return with Technical Bid.
- 2. The bid should be submitted in three envelopes i.e (i)Tender Fees, EMD & Checklist as per Annexure II, (ii) Technical Bid with all terms & conditions, documents & catalogs etc (iii) Price/Financial bid
- 3. Tender/Offer/Bids should be in English language only and it should be valid as per Bid validity from the date of opening of tender and will be binding on you for specifications offered & the rate quoted. Rate must be quoted correctly & precisely in words as well as in figure along with currency.
- 4. Tender should be submitted only by the Original Equipment Manufacturers (OEM) / authorized dealers/representatives.
- 5. Technical Bid should contain of Technical compliance statement, catalogs, details technical literature, authority letter given by OEM, Letter of Bid etc with Tender number, name of item.
- 6. All other charges should be clearly mentioned otherwise offer will be deemed as Inclusive of all other charges. No hidden charges will be accepted after opening of financial bid.
- 7. The technical compliance statement as per Annexure I shall be duly filled signed & stamped by manufacturer or his authorised and responsible person of bidding firm as a noting and acceptance & shall be binding on you during the course of supply and upto completion of contract.
- 8. Technical Literature / Catalogues / Brochures, technical data sheet etc. for the particular quoted models should be enclosed to technical bid.
- 9. All tenders pages/Quotations should be properly typed and free from over-writing. Erasing, correction or additions etc. must be attested by authorized signatory.
- 10. Bidders should furnish their Bankers details, GST Registration number, HSN / SAC code, PAN no. etc.
- 11. Bidder should furnish the valid authority letter issued by OEM for quoting on his principal behalf.
- 12. Incomplete offer not in line with the terms & conditions, instructions of the Tender documents and offer received by fax or after due date & time will not be considered and liable to be rejected.

- 13. List of standard Accessories associated with the basic machine / instruments / goods should be properly described along with technical bid and cost of all standard and associated accessories should be included in basic machine cost.
- 14. Bidder shall specify whether the basic items quoted are capable to meeting the required specifications as per PPDC's technical requirement or any additional/optional & essential accessories are required. If required, then bidder should specify list of standard/essential/additional/optional accessories and list should be enclosed with technical bid for proper evaluation & prices should be indicated separately in Price Bid.
- 15. All the clauses governing the Tender documents and the Important Notice attached should be duly filled in & stamped & signed by authorised person of bidding firm.
- 16. PPDC, Agra reserve the right to seek clarification/ justification from the bidders on the offered technical specifications & the bid price in case the PPDC, Agra deems it necessary based as the justification provided by the bidder, if the PPDC, Agra feels that the price is unrealistic/infeasible in order to. PPDC, Agra reserves the right to reject the said bid. The bidders shall be governed by the decision of the client.
- 17. PPDC, Agra reserves the right to reject any or all offers without assigning any reason whatsoever. PPDC also reserves the right to accept any tender in whole or in part without assigning any reason whatsoever. Opening of tender is no commitment whatsoever and does not prejudice the aforesaid rights of the PPDC to reject any or all offers without assigning any reason or accept any tender in whole or in part without assigning any reason whatsoever.

Payment terms:

- 18. Advance payment terms are not acceptable, Payment will be provided after successful installation.
- 19. Mere participation in the tender and offering of lowest rates does not confer any right on any party for placing order on them.
 - 20. All the disputes arising out of the contract shall be subject to Agra (UP) India Jurisdiction only.
 - 21. Parties are required to affect supplies, commission and install the machinery/equipment/items at various locations and extend/maintain warranty/guaranty commences from the date of completion of installation/commissioning and training.
 - 22. All the matters concerned to and not covered herein above, the decision of Principal Director, PPDC, Agra shall be final and binding on the parties.
 - 23. The equipment offered shall be strictly conforming to specification or better and for complete unit correct accuracies and standard.
 - 24. The Principal Director, PPDC, Agra reserves the option of inspecting the goods by our own representative at suppliers works prior to Packing and Dispatch or by third party appointed by us. However the supplier should furnish the inspection report of the

equipment prior to inspection by PPDC representative. Supplier shall provide all facilities for carrying out the inspection. However the final inspection will be carried at PPDC, Agra. Inspection Charts and guarantee certificate of quality should be provided along with the material.

- 25. Training either at suppliers work or at any other place shall be to the suppliers account.
- 26. Supplier must enclose in technical bid their offer list of customer (with their full address and their purchase reference no.) to whom they have made similar supplies in the past five years. The date of supply should also be indicated.
- 27. The supplier should also mention the nearest service Centre of the equipment/machines for servicing/repairing after commissioning.
- 28. The equipment should be complete in all respect.

Guarantee:

1. The supplier shall furnish guarantee in respect of material and manufacturing defect in machine/ equipment, performance at least for period of 12 months (one year) from the date of commissioning and installation, Any defect notified during this period shall be rectified free of cost which include replacement of part or in full as needed.

Bid Validity:

Bids should be valid for minimum 90 days from the date of opening of tender and will be binding on you for specifications offered & the rate quoted. Rate must be quoted correctly & precisely in words as well as in figure along with currency.

Late delivery charges:

1% per month to a maximum of 5% of the order value for any delay beyond agreed delivery schedule from the date of Purchase Order. PPDC reserve the right to cancel the order or a part thereof in case of delay beyond the 3 months forfeiting the EMD.

Termination of Contract:

On acceptance of tender, if the successful bidders is failure to deliver the goods within the accepted delivery period or as extended or at any time repudiates the contract before the expiry of such period the purchaser may without prejudice to their other rights may cancelled the contract.

Purchase Preference Policy Linked with Local Content (PP-LC) As per Revised Order 2017 Dates 04.06.2019.

Under the purchase Preference Policy linked with Local Content (PP-LC), the bidder or service providers are allowed to avail the purchase preference linked with attaining stipulated Local Content.

Tender Inviting Authority reserves the right to allow the bidders or manufacturers or service providers, purchase preference as admissible under the Public procurement (Preference to make in India), Order 2017-Revision policy, subject to their complying with the requirements/conditions defined herein and submitting documents required to support the same.

Local Content: Local content means the amount of value Added in India which shall unless otherwise prescribed by the nodal ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.

The bidder claiming the PP-LC benefit shall be required to furnish a self-certification on bidder's letter head indicating percentage of local content and confirming that the item offered meets the local content requirement for "class I local bidder /Class II local bidder" as the case may be and this undertaking shall be certified by the authorized signatory of the bidder signing the bid giving the details of the locations at which the local value addition is made.

The onus of submission of appropriately certified documents lies with the bidder and the purchaser shall not have any liability to verify the content and will not be responsible for the same.

However, in case the procuring authority has any reason to doubt the authenticity of the local content, it reserves the right to obtain the complete back up calculations before award of order failing which the bid shall be rejected.

False declarations will be in breach of the code of Integrity under Rule 175(1)(i)(h) of the General Finance Rules for which a bidder or its successors can be debarred for up to two years as per rule 151(iii) of the General Finance Rules along with such other actions as may be permissible under law.

CALCULATION OF LOCAL CONTENT-GOODS (Below Calculation is indicative only) for detail rule, order no P-45021/2/2017-PP (BE-II) dated 04.06.2020 issued by Ministry of Commerce and Internal Trade (public procurement section) may please be referred.

Total Basic Cost of Goods/Machine (W.O. Tax) = a.

Total value of all the imported content used in construction of above Machinery/Goods (Including custom duty) = b

% Local Content=((a-b)/a)x100

(OFFICE SEAL) (SIGNATURE OF AUTHORIZED PERSON)

NAME :

DESIGNATION:

DATED :

PART – II

ANNEXURE-II

(To be submitted by Bidder on Letter head along with Technical Bid)

Declaration of Local Content by Bidder

| Name of Bidder: | | | | |
|--|--|--|--|--|
| Name of Machine / Model: | | | | |
| Manufacturer of Machine: | | | | |
| l/ We hereby declare that in above quoted Machine / Goods, Local Content is | | | | |
| % as per order no P-45021 /2/20I7-PP (BE-ll) dated 04.06.2020 issued by Ministry of Commerce and Internal Trade (public procurement section) Govt. of India. | | | | |
| (Signature of the Bidder, with Official Seal) | | | | |
| | | | | |
| PART-I | | | | |
| ANNEXURE-II | | | | |
| (To be submitted by Bidder on Letter head along with Technical Bid) | | | | |
| Certificate regarding Compliance of GFR Rule 144(xi) | | | | |
| I have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India. I certify that This/My/Our firm is not from such country or, from such country, has been registered with the Competent Authority. I hereby certify that this firm fulfills all requirements in this regard (GFR rule No. 144-xi) and is eligible to be considered. (Where applicable valid registration certificate by the Competent Authority to be attached) | | | | |
| (C) | | | | |
| (Signature of the Bidder, with Official | | | | |
| Seal) Name of Firm: | | | | |

(Letter of Bid)

(To be print on bidders letter head)

| • |
|------|
| L U. |

The Principal Director,

MSME Technology Development Centre (PPDC) Agra,

Foundry Nagar, Agra - 282 006.

Dear Sir,

I / We agree, on acceptance of the tender in whole or in part, to supply to MSME TECHNOLOGY DEVELOPMENT CENTRE, AGRA (Process and Product Development Centre), Agra 282 006, India the machine / equipment / goods and accessories, detailed in Technical Bid (Part-I) of the Tender enclosed herewith at prices quoted by me / us in Price Bid (Part-II) of the Tender which is also enclosed herewith in a sealed cover marked Price Bid (Part-II)'. I / We agree to hold the offer open for 90 days from the due date. I / We have read and understood the terms and conditions of the tender documents which shall become Contract on acceptance of tender, and agree to be governed by the same. I / we specifically undertake that I / We will not resile from my /our offer or modify the terms and conditions thereof

Authorized Signature & Seal of Tenderer

Name & Address of the firm:

| Place: |
|-------------------------------|
| Name: |
| Date: |
| Designation: |
| |
| WITNESS Name & Address of the |
| firm : Signature : |
| Name: |
| Designation: |

ANNEXURE-III

BIDS FROM DEALERS/AGENTS WITHOUT LETTER OF AUTHORITY FROM THE ORIGINAL EQUIPMENT MANUFACTURERS ARE LIABLE TO BE SUMMERILY REJECTED.BIDS NOT ACCOMPANIED BY EMD SHALL BE REJECTED.

CHECK LIST (to be duly filled by bidder & to be submitted along with Technical Bid)

| S.No. | Particulars | Answer Ref.Page |
|-------|--|--------------------|
| 1. | Have you submitted Earnest Money Deposit (EMD) | |
| 2. | Have you furnished a authority letter from OEM | Yes/No |
| 3. | Have you returned/submitted tender documents duly filled, Yes/No signed stamped by authorized person of bidding firm | |
| 4. | Have you furnished catalogues/ Boucher of quoted items | Yes/No |
| 5. | Have you furnished bankers details/ GST/HSA/SAC/PAN no. etc | Yes/No |
| 6. | Have you furnished technical specifications compliance statement | Yes/No |
| 7. | Have you quoted delivery period correctly and precisely | Yes/No |
| 8. | Have you kept your offer valid for 90 days | Yes/No |
| 9. | . Have you quoted your rates in figure and words (in price bid) | |
| 10. | O. Have you agreed for PBG clause | |
| 11. | Have you agreed for payment clause | |
| 12. | Have you agreed for warranty/Inspection/Training clause | Yes/No |
| 13. | Have you agreed for calibration certification/documentation clause | Yes/No |
| 14. | Have you provided list of customers alongwith purchase order to whom Model/Items have been supplied. (Pl. Encl. P.O. copy to Tech. Bid.) | |
| 15. | Have you agreed for arbitration clause | Yes/No |
| 16. | Have you provide details of country of origin of item, Yes/No Gross/Nett weight of shipment, Dimensions of shipment (LxHxW), Name & complete address of firm for order placement etc | Yes/No |

Technical Specification of IoT & Automation Lab Equipments:

| | PPDC Requirement | | | |
|----------|--|---|--------|---------------------------|
| SI No | Requirement | Specification | Qty | Supplier Specification |
| 1 | PLC and HMI Kit (Siemens) | PLC - 5 D/I and 5 D/O, Memory - 500 KB for program and 3 MB for data. HMI - 8 Inch (Siemens Make) Input & Output - Digital and Analog Cloud connection - Required. (Licensed Version of MQTT/Profinet) | 05 nos | |
| 2 | Servo Drive Kit | Output Power: 7.0 KW, Output Current: 13.20 A, Input Voltage: 380 to 480 V (+10 % -15 %) Input Phase: 3 - Phase, PLC to Drive Communication – Required along with communication Cable | 02 nos | |
| 3 | Vision Sensor Kit (Siemens / Omron) | USB / RS 232, Bluetooth interface, Min distance - 1.9 inch, Max distance - 14.8 inch, PLC and HMI Interface - Required along with communication Cable) HMI - 8 Inch | 01 no | |
| 4 | Sensor and controlling kit | Type - PNP/ NPN 1. Metal 2. proximity Digital | 05 nos | |
| 5 | Analog sensor kit | Color sensor - Max 2500 nm wavelength, Temperature Sensor (3 wire, 10- 24 V DC) pressure sensor (3 wire, 10-24 V DC) Ultrasonic Sensor - 24 V DC | 02 nos | |
| 6 | Basic Electrical and safety Kit | MCB – 2 pole and 3 pole MCCB – 3 Pole 150 Amps. | 02 nos | |

| | | 1 | |
|----|-----------------------------|---|--------|
| | | 3. ELCB – 3 Pole 230 V | |
| | | Digital and analog inputs | |
| | | Push Button, Selector | |
| | | Switch, Potentio Meter, | |
| | | Limit Switch, Proximity | |
| | | Switch. | |
| | | Digital and analog | |
| | | Outputs – Indicators | |
| | | (RYB), Relays, Contactors | |
| | | and Signalling Column. | |
| 7 | AC Drives with Motor | 1. Motor - 5 HP, 3 Phase | 02 nos |
| | | 2. communication module - | |
| | | PC to controller with | |
| | | Cable | |
| | | 3. Modbus Communication | |
| 8 | Six axis Robot (Kuka/Fanuc) | 1. Type -Vertical, | 01 nos |
| | , , , | 2. Capacity -6 kg payload, | |
| | | 3. Min reach 726 MM, | |
| | | 4. 53 Kg weight, | |
| | | 5. PLC Interface – Required | |
| | | with Cables | |
| | | | 02 |
| 9 | Industrial IOT Controller | 1. Ethernet port, | 02 nos |
| | (Siemens/Phoenix) | 2. DDR3 RAM, | |
| | | 3. 8 MB FLASH, | |
| | | 4. 10/100 com port | |
| | | speed, | |
| | | 5. SD Card, MQTT | |
| | | Support | |
| 10 | PLCnext Technology | PLCnext Control AXC F | 01 no |
| | Training Kit (Phoenix) | 2152 | |
| | | 2. Voltage Switch | |
| | | 3. Digital Input and output | |
| | | Module | |
| | | 4. Proficioud License with | |
| | | 8760 unit credit | |
| | | 5. Analog Input and Output | |
| | | Module | |
| | | 6. Potentiometer | |
| | | 7. Switch Module | |
| | | 8. Power supply Unit | |
| | | 9. Patch Cable | |
| 11 | Electro Pneumatic Training | 1. Trolley (Aluminum | 02 nos |
| | Kit (Festo/SMC) | Channel) with frame & | |
| | | caster wheels with Brake | |
| | | (Load capacity: 400 Kg) - | |
| | | 1 no | |
| | | 2. Compressor (50 LPM, 8 | |
| | | Bar, 24 Liter Tank | |
| | | Capacity) – 1 no | |
| | | 3. Single acting cylinder | |
| | | J. Single deting cynnaci | |



- (Stroke: 50 mm, with One Way Flow Control Valve) – 1 no
- 4. Double acting cylinder (Stroke: 200mm, with One Way Flow Control Valve) 3 nos
- 5. Two Pressure Valve 2nos
- 6. Shuttle Valve 3 nos
- 7. Quick Exhaust Valve 1 no
- 8. Three Way Two Position Knob Operated Direction Control Valve (NC Type) -2nos
- Three Way Two Position Roller Operated Direction Control Valve (NC Type) – 2 nos
- Three Way Two Position Pilot Operated Direction Control Valve (NC Type)
 1 no
- Three Way Two Position Solenoid Operated Direction Control Valve (NC Type) – 1no
- 12. Push Button 3 Port Valve (NC Type) 1 no
- Five Way Three Position Lever Operated Direction Control Valve – 1 no
- 14. Five Way Three Position Double Solenoid Direction Control Valve – 1 no Five Way Three Position Double Pilot Direction Control Valve – 1 no
- Five Way Two Position Single Pilot Direction Control Valve – 1 no
- 17. Five Way Two Position Double Pilot Direction Control Valve – 3 nos
- 18. Five Way Two Position
 Lever Operated Direction
 Control Valve 1 no
- 19. Five Way Two Position Single Solenoid Direction

| | | | T | I |
|----|--|--------------------------------|--------|---|
| | | Control Valve – 1 no | | |
| | | 20. Five Way Two Position | | |
| | | Double Solenoid | | |
| | | Direction Control Valve – | | |
| | | 4 nos | | |
| | | 21. Three Way Two Position | | |
| | | Time Delay Valve – 2nos | | |
| | | 22. Pneumatic motor – 1 no | | |
| | | 23. Two way Flow control | | |
| | | valve – 1 no | | |
| | | 24. Vacuum generator with | | |
| | | Vacuum clamp – 1 no | | |
| | | 25. FRL Unit (Filter Regulator | | |
| | | & Lubricator) – 1 no | | |
| | | | | |
| | | 26. Pressure Regulator – 1 | | |
| | | no 27. Pressure Switch with | | |
| | | | | |
| | | Digital set point – 1 no | | |
| | | 28. Pressure Line Manifold – | | |
| | | 1 no | | |
| | | 29. Isolator Block – 1 no | | |
| | | 30. Electrical Control Panel 1 | | |
| | | Set as per DIN standard | | |
| | | – 1 no | | |
| | | 31. Proximity Sensors (Test | | |
| | | Voltage 30 V DC max) – | | |
| | | 12 nos | | |
| | | 32. Quick Push Pull | | |
| | | connector – As Required | | |
| | | 33. Plastic Tubing (PU6) – As | | |
| | | Required | | |
| 12 | Electro | 1. Trolley (Aluminum | 02 nos | |
| | Hydraulic | Channel) with frame | | |
| | Training Kit | & caster wheels | | |
| | - | with Brake (Load | | |
| | 1 Sec. 110 | capacity: 400 Kg) | | |
| | | 2. Hydraulic tank with | | |
| | | 30 Litre capacity, Oil | | |
| | | cleanliness: Level 8 | | |
| | | (With suction filter | | |
| | | and return line | | |
| | KANG TO THE TOTAL THE TOTAL TO THE TOTAL TOT | filter) – 1 no | | |
| | 1 | 3. Variable Frequency | | |
| | | Drive for studying | | |
| | ~ | pump | | |
| | | characteristics – 1 | | |
| | | nos | | |
| | | 4. Three Phase flange | | |
| | | mounted electric | | |
| | | motor 2 HP -1500 | I | |
| 1 | | 1110101 2 HP -1300 | | |
| | | rpm – 1 no | | |

| | Pressure Gauge | |
|-----|----------------------|--|
| | Isolator – 1 no | |
| 6. | Vane Pump (Flow | |
| | Rate: 6 LPM, Max | |
| | Pressure: 140 Bar) – | |
| | 1no | |
| 7 | Hydraulic Motor | |
| 7. | Bidirectional – 1no | |
| 8. | | |
| 0. | | |
| | Valve (Direct | |
| | operated relief | |
| _ | valve) – 2 nos | |
| 9. | | |
| | (Non Pressure | |
| | Compensated) with | |
| | Check Valve – 2nos | |
| 10. | Flow Control Valve | |
| | (Pressure | |
| | Compensated) with | |
| | Check Valve – 1no | |
| 11. | Pressure Sequence | |
| | Valve - 1no | |
| 12. | Pressure Reducing | |
| | Valve -1 no | |
| 13. | Four way Two | |
| | position manually | |
| | operated direction | |
| | control valve – 1 no | |
| 1/1 | Four way Three | |
| 14. | | |
| | | |
| | • | |
| | control valve – | |
| | Tandem Center – 1 | |
| | no | |
| 15. | Four way Three | |
| | position manually | |
| | operated direction | |
| | control valve – | |
| | Closed Center – 1 | |
| | no | |
| 16. | Single Acting | |
| | Cylinder (Stroke: | |
| | 100mm, Dia: 25mm, | |
| | Test Pressure: 70 | |
| | Bar) – 1 no | |
| 17. | Double Acting | |
| | Cylinder (Stroke: | |
| | 200 mm minimum | |
| | Test Pressure 130 | |
| | Bar) – 2 nos | |
| 10 | Check Valve Direct | |
| 18. | | |
| 10 | Operated – 1 no | |
| 19. | Single Pilot | |

| | T | 1 | 1 |
|-----|---|--|--------|
| | | Operated Check | |
| | | Valve – 1 no | |
| | | 20. Needle Valve – 1 no 21. Pressure Switch – | |
| | | 1no | |
| | | 22. Four Way Three | |
| | | Position Double | |
| | | solenoid operated | |
| | | direction control | |
| | | valve – 3 nos | |
| | | 23. Four Way Two | |
| | | Position Single | |
| | | solenoid operated | |
| | | direction control valve – 1 no | |
| | | 24. Proximity Sensors | |
| | | (Test Voltage 30 V | |
| | | DC max) – 8 nos | |
| | | 23. Electrical control panel | |
| | | with all safety | |
| | | precautions and 230 | |
| | | Volts short circuit | |
| | | protection safety as per | |
| | | DIN standard – 1 no | |
| | | 24. DC Power supply with modulator and rectifier – | |
| | | 1no | |
| 13 | loT Sensor | LDR Module | 25 nos |
| 14 | IoT Sensor | IR Sensor Module | 25 nos |
| 15 | IoTSensor | MQ-5 Smoke Detector Sensor | 25 nos |
| | | Module | |
| 16 | IoTSensor | Puls Sensor Module | 25 nos |
| 17 | IoTSensor | Heartbeat Detector sensor Module | 25 nos |
| 18 | IoTSensor | Carbon Monoxide Sensor MQ-7 | 25 nos |
| 10 | 1.70 | Module | |
| 19 | loTSensor | Current Sensor - ACS712 -5 AMPS Module | 25 nos |
| 20 | IoTSensor | Voltage sensor-230AC | 25 nos |
| 21 | loTSensor | Sound Sensor Module | 25 nos |
| 22 | IoTSensor | Vibration Sensor Module | 25 nos |
| 23 | loTSensor | Flex Sensor Module | 25 nos |
| 24 | loTSensor | Alcohol Detector Sensor MQ-303A | 25 nos |
| - ' | , | module | |
| 25 | IoTSensor | MQ-2 Gas | 25 nos |
| 26 | IoTSensor | Bio Metric Sensor module | 10 nos |
| 27 | IoTSensor | DHT-11 Sensor Module | 25 nos |
| 28 | IoTSensor | HCSR-04 Sensor Module- | 25 nos |
| | | Ultrasonic Sensor Module | |
| 29 | IoTSensor | ADX-335 Module | 25 nos |
| 30 | IoTSensor | PIR Sensor Module | 25 nos |
| | | | |

| 31 | IoTSensor | Trpale Axis Magnetometer R Breakout-HMC5883L | 25 nos |
|----|-----------------------------|---|--------|
| 32 | IoTSensor | Flam Sensor | 25 nos |
| 33 | IoTSensor | Force Sensor Module | 25 nos |
| 34 | IoTSensor | Metal Detector Module | 25 nos |
| 35 | IoTSensor | TSOP 1738 | 25 nos |
| 36 | IoT Board | Node MCU | 25 nos |
| 37 | IoTBoard | Arduino Mega2560 | 20 nos |
| 38 | IoTBoard | Arduino UNO R3 Board | 25 nos |
| 39 | IoTBoard | Raspberry Pi 4 Model-B with 8 GB RAM | 30 nos |
| 40 | IoTBoard | Raspberry PI-3B+ Model element14) | 15 nos |
| 41 | IoTBoard | Arduino MKR WAN 1300 (LoRa connectivity) | 10 nos |
| 42 | IoTBoard | Linkit One (GPS, GSM, GPRS, WiFi, and Bluetooth.) | 10 nos |
| 43 | IoTBoard | FLORA - Wearable electronic platform: Arduino-compatible - v3 | 20 nos |
| 44 | IoTBoard | Intel Edition Breakout | 10 nos |
| 45 | IoT Cemara | CMOS IR Cemara Module- 728X488 for Rpi | 10 nos |
| 46 | IoT Communication Module | Zig-bee Module : XBee3 PRO,2.4 Ghz ZB 3.0, U.FL Ant, SMT | 10 nos |
| 47 | IoT Communication Module | LoRA Module & Gateway: Supports RPI 4/3B+ & Arduino Base on sx1301 + 2 * SX1257 10 programmable parallel demodulation paths | 05 nos |
| 48 | IoT Communication Module | Siemens Simatic IoT 2040 Complete kit Setup | 02 nos |
| 49 | IoT Communication Module | ESP8266-01 | 25 nos |
| 50 | IoT Communication Module | RF Encoder and Decoder | 25 nos |
| 51 | IoT Communication Module | RF Module TX & RX 315 MHz | 25 nos |
| 52 | IoT Communication Module | HC05 Bluetooth Module | 25 nos |
| 53 | IoT Communication Module | RFID Reader & Tags (IC Card Sessor) | 10 nos |
| 54 | IoT Communication Module | GPS Module For microcontroller and Micro Processor | 10 nos |
| 55 | IoT Communication Module | Arduino UNO Ethernet shield | 25 nos |
| 56 | IoT Communication Module | GSM For microcontroller and Micro Processor | 10 nos |
| 57 | Display | Raspberry pi touch screen 10 inch | 30 nos |
| 58 | Actuator | DC Motor 5V & 24V DC | 25 nos |
| 59 | Actuator | BO Motor 300 RPM, Single Shaft | 25 nos |
| 60 | Actuator | Stepper Motor 5 V and 24 V DC | 10 nos |
| 61 | Actuator | Servo Motor 5 V and 24 V DC | 10 nos |
| 62 | Actuator Driver | L2938 Motor Driver | 25 nos |

| 63 | Switch | 4 Chennal Relay | 10 nos |
|----|-----------------|--|---------|
| 64 | Switch | Single Chennal Relay | 25 nos |
| 65 | IoT | FTDI Board | 25 nos |
| 66 | Accessory | Solderless Bread Board : 2000 Points + | 25 nos |
| 67 | Accessory | Single Stand Wire | 300 nos |
| 68 | Accessory | Resistor, 330ohm, 770ohm, 1k, 10K, 1M | 500 nos |
| 69 | Accessory | LED, Red, White, Yellow | 300 nos |
| 70 | Accessory | Buzzer | 25 nos |
| 71 | Accessory | USB Cable | 25 nos |
| 72 | Accessory | (V Battery + CAP | 25 nos |
| 73 | Accessory | Soldering IRON + Paster + Soldering wire & desoldering tool | 05 nos |
| 74 | Accessory | Multimeter Digital (Fluke / Innova / Etekcity) | 05 nos |
| 75 | Accessory | Wire Steeper | 25 nos |
| 76 | Accessory | SD card 16 GB, Class 10 | 50 nos |
| 77 | Accessory | HDMI to VGI Cable | 35 nos |
| 78 | Accessory | Arduino Case | 25 nos |
| 79 | Accessory | Power Adopter (5V , 12V , 24 V DC) | 100 nos |
| 80 | Accessory | Raspberry PI-3 Case | 30 nos |
| 81 | Actuator Driver | Motor Driver Hat : Resberry Pi | 10 nos |
| 82 | IoTBoard | Raspberry Pi Zero W (Wireless) With In-Built Wifi and Bluetooth | 30 nos |