

## राजस्थान–सरकार तकनीकी शिक्षा निदेशालय, राजस्थान, जोधपुर

क्रमांक :- एफ ( )तिशानि / ई-5 / 2024-2025 / 7868

दिनांक :-.27.08..2024

## ई-निविदा सूचना संख्या 01/2024-2025

तकनीकी शिक्षा निदेशालय, जोधपुर द्वारा विभिन्न राजकीय पॉलिटैक्निक महाविद्यालयों की यांत्रिकी शाखा के लिए उपकरण, मशीनरी उपापन हेतु कुल राशि रूपये 604 लाख मात्र हेतु इच्छुक सक्षम निविदादाताओं से निर्धारित प्रपन्न में ई—टेण्डरिंग प्रक्रिया के अंतर्गत ऑन लाइन निविदा आमंत्रित की जाती है। निविदा की प्रारंभ तिथि एवं समय दिनांक 30.08.2024 सायं 06:00 बजे एवं अंतिम तिथि व समय दिनांक 23.09.2024 सायं 06:00 बजे तथा तकनीकी निविदा खोलने की तिथि दिनांक 24.09.2024 साय 11:00 बजे रहेगी। निविदा से संबंधित अन्य समस्त विवरण इंटरनेट वैबसाईट प्रातः 11:00 बजे रहेगी। निविदा से संबंधित अन्य समस्त विवरण इंटरनेट वैबसाईट <u>www.eproc.rajasthan.gov.in</u> <u>www.sppp.rajasthan.gov.in</u> एवं <u>www.dte.rajasthan.gov.in</u> पर उपलब्ध है।

UBN No .: TED 2425 A 5009

TED 2425 GLOB 000) 0.

निदेशक, तक्तीकी शिक्षा

निविदा सम्बन्धी दस्तावेज निम्नानुसार अपलोड करावें। (चैकलिस्ट)

क्र. सं.	ानावदा सम्बन्धा दस्तावज ।नम्नानुसार अपलाङ कर विवरण	पेज नम्बर
1.	Scanned copy of Bid document	3
2.	Instruction to Bidder document Duly Signed and Sealed	4 to 6
3.	General condition of Tender Duly signed & sealed	7 to 10
4.	S.R. 16 Duly Signed and Sealed	11 to 18
5.	ANNEXURE-A	19
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7.	ANNEXURE-C	21 to 22
8.	FORM NO. 01	23
9.	ANNEXURE- D	24
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12.	ANNEXURE-G	27
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24.	GST Registration Certificate and GST Challan	
25.	Scanned copy of PAN card	
26.	Technical Specification Annexure –H(original downloaded &(original uploaded otherwise bid should not be considered.)	
27.	Annual Turnover Certificate from Chartered Accountant (Letter Head with seal, e-mail address, Mobile Number, Firm full address)	
28.	Literature/Leaflets/Catalogue	
29.	Authorization Certificate	
30.	Scanned copies of Bid Fee DD / E-Gras Challan Rs. 2000/- submit to Director, Technical Education, Jodhpur	
31.	Scanned copies of Bid Security DD E-Gras Challan Rs. 1208000/-submit to Director, Technical Education, Jodhpur	
32.	Scanned copies of BidProcessing DD / E-Grass Challan Rs 2500/- submit to MD RISL.	
33.	Any other Document	
34.	Authorization of Digital Signature (if applicable)	
35.	Scanned copy of power of Attorney to sign the Tender document (If Required)	
COVI	ER – II : Financial/Price Bid/BOQ (.xls)	
36.	Price bid/BOQ Details of Price quoted of the material offered in Price bid/BOO	

निम्नांकित बिन्दुओं की पालना अवश्य ही करें :--

- लीफलेट/केटलॉग/लिट्रेचर प्रत्येक आईटम अनुसार होना चाहिये (जिसमे मैन्यूफेक्चर का पूरा नाम, पत्राचार व्यक्ति के मोबाईल नम्बर/दूरभाष नम्बर/ई—मेल पूर्ण अंकित हो) जिस पर एनेक्शर "एच" के किस क्रम संख्या से सम्बन्धित है क्रम संख्या अंकित करावें।
- 2. अगर आपको क्रयादेश जारी किया जाता है तो क्रयादेश में वर्णित आपूर्ति अविध में सामानो की आपूर्ति करावें। अगर किन्ही परिस्थितियों के दृष्टिगत आप समयाविध में आपूर्ति नहीं कर सकते है तो आपूर्ति अविध समाप्त होने से पहले विभाग को लिखित में सूचित करेंगे, अन्यथा संस्था प्रधान द्वारा आपूर्ति स्वीकार नहीं की जायेगी। नियमानुसार निदेशालय द्वारा आपूर्ति अविध बढाने के पश्चात् ही सामानों की आपूर्ति करावें।
- 3. एनेक्शर "एच" जो डाउन लोड किया जायेगा उस में सूचना भरकर उसी को अपलोड किया जायेगा आपके लेटर पर एनेक्चर "एच" तैयार कर अपलोड नहीं किया जायेगा। फिर भी आपके द्वारा फर्म के लेटर पर अलग से एनेक्चर एच तैयार कर अपलोड किया जायेगा तो उस निविदा को रिजेक्ट कर दिया जावेगा। जिसके सम्बन्ध में किसी प्रकार के पत्राचार पर विचार नहीं किया जायेगा।
- 4. क्रम संख्या 1 से 23 के डोक्यूमेन्ट डाउन लोड करने के पश्चात पूर्ण सूचना भर पुनः अपलोड किया जायेगा। फर्म के लेटर पर क्रम संख्या 1 से 23के डोक्यूमेन्ट तैयार कर अपलोड नहीं किये जायेगें।
- 5. निविदा भरने में या किसी प्रकार का संशय हो तो दूरभाष संख्या 0291-2434271, 2434395 पर प्रातः 11.00 बजे से दोपहर 4.00 बजे तक वार्ता कर सकते है।

I/we have carefully read and understood above instruction

#### **GOVERNMENT OF RAJASTHAN**

#### DIRECTORATE OF TECHNICAL EDUCATION RAJASTHAN, JODHPUR

W-6,GAURAV PATH, JODHPUR. Phone-0291-2434271Fax-2430398 Visit us: www.dte.rajasthan.gov.in e-mail ID: dte\_raj@rajasthan.gov.in

RID DOCUMENT FORM	

1. Name of item: - Mechanical Lab Items.

- 2. Name & full address of the firm submitting the bid along with Tel. No., Fax No. & e-mail/
- Mobile No.

M/s:
Full Address :
Tel. No./FAX/Mobile :
e-mail:

- 3. Addressed to :-Director (Education), Directorate of Technical Education Rajasthan, Jodhpur- 342032 (e-mail :- dte raj@rajasthan.gov.in)
- 4. Reference: e-Tender Notice No 1/2024-25 Dated 27.082024
- 5. The estimated cost of the tender is Rs. 604 Lakhs. The Processing fee ofRs. 2500/-, Bid feeRs. 2000/- and Bid Security (EMD) Rs. 1208000/- should be deposited vide Demand Draft or vide e-GRAS challan in concern head.
- 6. All documents required as per bid documents are enclosed.
- 7. Goods will be delivered within the stipulated delivery period from the date of the supply order at the designated place mentioned in the work order which may be subject to change as per requirement of the department.
- 8. I/ We agree to abide by all the Terms & conditions mentioned in e-Tender Notice No.- 1 /2024-25 dated 27.08.2024 issued by the Department and also agree to further Terms & Conditions including general conditions of the said tender notice given in the attached sheets (all the pages, all document, all document Check list S.N. 1 to 35 and other required document of which has enclosed signed with stamp by me/ us in token of my/our acceptance of the terms & condition mentioned therein)otherwise concerned Tender will not be considered for Technical Evaluation full responsibility by me.

SIGNATURE OF THE BIDDER WITH SEAL AND DESIGNATION

<sup>\*</sup>The words bid or tender and bidder or tenderer where ever mentioned in attached documents are synonyms and having same meaning.

#### GOVERNMENT OF RAJASTHAN

## DIRECTORATE OF TECHNICAL EDUCATION RAJASTHAN, JODHPUR

## **Instruction to Bidders for Online Bidding (e-Tendering)**

Information to be disseminated to prospective bidder regarding on line Bidding.

4	Information to be diss		
1.		n be downloaded from web site <a href="http://eproc.rajasthan.gov.in">http://eproc.rajasthan.gov.in</a> &	
		ectronic format on same web site.	
2.	Office address: - Director (Education), Directorate of Technical Education Rajasthan, Jodhpur-342032Phone-0291-2434271		
	_		
	e-mail ID: dte_raj@		
3.		ne Bids, Bidders will have to possess Digital Signature Certificate	
		per information Technology Act-2000 using which they can sign	
	their electronic bids, Bidder can procure the same from any CC approved certifying		
	agency, i.e. TCS safecrypt, Ncode etc. or they may contact e-procurment Cell		
	Department of It & C, Government of Rajasthan for further assistance: Bidder who already		
		Certificate need not required to procure a new Digital Certificate.	
		022688 (Help desk 10 am to 6 pm on all working days) E mail:	
	eproc@rajasthan .gov		
	Address: e-Procurem	ent Cell, RISL, Yojna Bhawan, Tilak Marg, C-Scheme, Jaipur.	
4.	Bid Procedure	Twostage opencompetitivee-Bid	
		procedureathttp://eproc.rajasthan.gov.in	
	Bid Evaluation Criteria	LeastCostBasedSelection(LCBS)-L1	
	(Selection Method)	Bidder with the lowest cumulative value of the financial	
		bid i.e. (Lowest financial cost after adding the cost of all	
		the items) shall be declared as L1 bid.	
5.	Before electronically	submitting the Bid, it should be ensured that all Bid papers including	
	I .	etc. are digitally signed by the Bidder and filled up as per the Bid	
	Guidelines.		
6.	Training for the bidders on the usage of e-tendering System is also being arranged by RISL		
	_	lers interested for training may contact e-Procurement Cell, RISL for	
	booking the training s		
7.	Bidders are also advised to refer "Bidders manual" available under "Downloads" section		
		ut the a tendering presses	
	for further details abo		
8.	The tenderer should s	ubmit the original Bid security fee,Bid fee and Bid processing fee	
8.	The tenderer should so vide Demand Draft or	ubmit the original Bid security fee,Bid fee and Bid processing fee reGRAS Challan at office premises before opening of Technical Bid	
8.	The tenderer should s vide Demand Draft or Instructions are as fol	ubmit the original Bid security fee,Bid fee and Bid processing fee reGRAS Challan at office premises before opening of Technical Bid	
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8.	The tenderer should so vide Demand Draft or Instructions are as fol Demand Draft Bid fee worth Rs. 200	ubmit the original Bid security fee,Bid fee and Bid processing fee reGRAS Challan at office premises before opening of Technical Bid lows:-	
8.	The tenderer should so vide Demand Draft of Instructions are as fol Demand Draft Bid fee worth Rs. 200 favour of "Director,"	ubmit the original Bid security fee,Bid fee and Bid processing fee reGRAS Challan at office premises before opening of Technical Bid lows:-  00/- and Bid Security Fee worth Rs. 1208000/- shall be depostited in Directorate of Technical Education, Jodhpur" payable at Jodhpur and	
8.	The tenderer should so vide Demand Draft or Instructions are as fold Demand Draft Bid fee worth Rs. 200 favour of "Director," Bid Processing Fee worth Rs. 200 favour of "Direct	ubmit the original Bid security fee,Bid fee and Bid processing fee reGRAS Challan at office premises before opening of Technical Bid lows:-	
8.	The tenderer should so vide Demand Draft or Instructions are as fold Demand Draft Bid fee worth Rs. 200 favour of "Director," Bid Processing Fee wat Jaipur	ubmit the original Bid security fee,Bid fee and Bid processing fee reGRAS Challan at office premises before opening of Technical Bid lows:-  00/- and Bid Security Fee worth Rs. 1208000/- shall be depostited in Directorate of Technical Education, Jodhpur" payable at Jodhpur and	
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8.	The tenderer should so vide Demand Draft or Instructions are as fold Demand Draft Bid fee worth Rs. 200 favour of "Director," Bid Processing Fee wat Jaipur eGRAS Challan Bid fee challan worh 0075-00-800-(52)-[01]	ubmit the original Bid security fee,Bid fee and Bid processing fee reGRAS Challan at office premises before opening of Technical Bid lows:-  00/- and Bid Security Fee worth Rs. 1208000/- shall be depostited in Directorate of Technical Education, Jodhpur" payable at Jodhpur and orth Rs. 2500/- shall be depostied in favour of "MD, RISL" payable Rs. 2000/- shall be deposited in the following head	
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#### 9. Technical Bid (First Cover in pdf) failing which Bid is liable to be rejected.

#### As per point no 8 of General Conditions of Tender.

Second cover (Financial/Price bid/BOQ-xls) should contain details of price quoted in BOQ.

In absence of the above or wrongly placing the required documents in any other cover or not mentioning the desired information at the specified place/ column, the bid may not be considered and will be rejected. The provisions of RTPP Rules 2013 & RTPP Act 2012 and Finance Department, Government of Rajasthan, orders and circulars will prevail in this regard.

- **10.** Incomplete & conditional Bid in any respect will be rejected without any information.
- 11. The Director (Education), Directorate of Technical Education Rajasthan, Jodhpur reserves the right to reject all/ any part of Bid received from the firms/ Bidders without assigning any reason thereof.

#### **12.** Note:

- 1) Bidder (authorized signatory) shall submit their offer on-line in electronic formats both for technical and financial proposal. However, BC/DD/e-Gras Challan for Bid document Fees, RISL Processing Fees and Bid Security should be submitted physically at the office of procurement entity before opening of technical bid and scanned copy of same shouldalsobeuploadedalong with the technical Bid/ cover.
- 2) In case, any of the bidders fails to physically submit the Banker's Cheque/ Demand Draft/e-Gras challan for Bid document Fees, Bid Security, and RISL Processing Fee before opening of technical bid,theirBidshall notbeentertained.

TheBanker's Cheque/Demand Draft/e-Gras Challan for RISL Processing Fee should be drawn in favour of "MD, RISL." payable at "Jaipur", Bidding document fee and Bid Security should be drawn in favour of "DIRECTOR, DIRECTORATE OF TECHNICAL EDUCATION, JODHPUR" from any Scheduled Commercial Bank as per point no. 8 as above.

- 3) DTE will not be responsible for delay in online submission due to any reason. For this, bidders are requested to upload the complete bid well advance in time so as to avoid 11th hour issues like slow speed; choking of web site due to heavy load or any other unforeseen problems.
- 4) No contractual obligation whatsoever shall arise from the bidding document/ bidding process unless and until a formal contract is signed and executed between the procuring entity and the successful bidder.
- 5) Procurement entity disclaims any factual/ or other errors in the bidding document (the onus is purely on the individual bidders to verify such information) and the information provided therein are intended only to help the bidders to prepare a logical bid-proposal.
- 6) The provisions of RTPP Act 2012 and Rules, 2013 shall be applicable for this procurement.

LISL

Furthermore, in case of any inconsistency in any of the provisions of this bidding document with the RTPP Act 2012 and Rules, 2013 the later shall prevail.

 Each bidder shall submit only one bid. Multiple bids submitted by a bidder shall be summarily rejected.

DIRECTOR (EDUCATION)
TECHNICAL EDUCATION RAJASTHAN
JODHPUR

I/we have carefully read and understood above instruction

Signature of bidder with seal

#### GOVERNMENT OF RAJASTHAN

#### DIRECTORATE OF TECHNICAL EDUCATION RAJASTHAN, JODHPUR

W-6,GAURAV PATH, JODHPUR. Phone-0291-2434271Fax-2430398 Visit us: www.dte.rajasthan.gov.in e-mail ID: dte raj@rajasthan.gov.in

#### GENERAL CONDITIONS OF TENDER

- 01. The bidders are requested to submit their bids prior to last date of submission to avoid Non-submission of their bids up to prescribed date due to non-availability of / hanging of website at last moments. The date of submission of bids will not be extended if system is hang up in last hours or congestion.
- 02. In case, the date fixed for opening of the tenders be declared as a public holiday, the bid shall be opened on the next date on which office re-opens after such holiday(s).
- 03. Physical submission of bids is not allowed.
- 04. Tenders shall be valid for a minimum period of **90 days** after the date of opening of tender. Tender mentioning a shorter validity period than specified are likely to be rejected.
- 05. The bidders who are interested in bidding can download tender documents from www.eproc.rajasthan.gov.in up to the stipulated date & time.
- 06. The bids will have to be Digitally signed by the bidder and submitted online in two covers in electronic format only on website **www.eproc.rajasthan.gov.in**
- 07. Furnishing of tender offer shall be strictly in the manner as prescribed in Instructions to bidder and terms & conditions of tender, failing which the tender is liable for rejection.
- 08. The following documents are to be uploaded in **Two covers** of the bid
  - **(A) TECHNICAL BID (First cover-pdf)**: The following documents are to be attached failing in which the bid is liable to be rejected:-
  - a. Scanned copies of Demand Draft or e-GRAS Challan of Bid fee, Bid Security, Bid Processing Fee as per point 8 of Instruction to Bidders for Online Bidding.
  - b. Scanned copies of Bid document form along with Conditions of tender (SR-16) &General Terms & Conditions duly signed and sealed.
  - c. Copies of acknowledgement of GST returns for the Latest quarter of the Current Financial Year (2024-25) are to be submitted along with G.S.T. registration certificate.
  - d. Instructions to bidders document duly signed & sealed by the bidder.
  - e. All the technical specification and details of the tendered item and technical specification in tabular form must be submitted as indicated at Annexure H
  - f. Price charging certificate as per (Annexure G).
  - g. Declaration by the tenderer (SR 11). (Annexure E).
  - h. Scanned copy of PAN card.
  - i. Scanned copy of catalogue/ literature/ leaflet and authorization certificate must be uploaded along with the bid otherwise will not be considered for technical evaluation.
  - j. Scanned copy of Power of attorney for authorized signatory to sign the tender document on Rs. 100/- Notary Stamp (if required).
  - k. Prescribed check list.

- 1. Format of RTGS/NEFT as per Annexure -J
- m. Any other documents which the bidder wants to submit and/ or any document as per tender.
- o. The Average Annual Turnover of the bidder for last three financial years (2021-22 to 2023-24) will be minimum equal to 200% of the estimated bid value as per BID. A certificate issued by the Chartered Accountant (Showing the Annual Turnover of last three years) with their Signature, registration No. & Seal must be submitted along with the bid.
- p. Authorization certificate in Annexure-L. L-1, L-2.
- q. 2 years Warranty/Guarantee Certificate by Bidder on 100/- Rs Notary stamp paper to be submitted with Bid.
- r. All Annexures duly signed with seal.
- s. (i) Experience Criteria:-T he Bidder should have regularly supplied same and similar category Machinery, Equipments and tools as per bid items to any Central / State Govt Organization / PSU / Government Undertaking Company for last 3 Financial years before the bid opening date. Copies of relevant contracts to be submitted along with bid in support of having supplied some quantity during the last three Financial year. For fulfilling the experience criteria any one of the following documents may be considered as valid proof (a) Purchase Order copy along with Invoice(s) with self-certification by the bidder that supplies against the invoices have been executed. (b) Execution / Completion certificate by concerned buyer with order value and purchase order.
  - (ii) The Bidder should have executed a single orderatleast 500 Lacs. for same or similar category Machiney, Equipments and tools as per Bid items in at least one of the last three financial years (2021-22,2022-23,2023-24) to any Central / State Govt Organization/PSU /Government Undertaking Company. For fulfilling the Past Experience criteria any one of the following documents may be considered as valid proof (a) Purchase Order copy along with Invoice(s) with self-certification by the bidder that supplies against the invoices have been executed. (b) Execution / Completion certificate by concerned buyer with order value and purchase order.
  - (iii) Past performance Criteria: The Bidder should have supplied same or similar Category Products as per bid items for 90% of bid quantity, in at least one of the last three Financial years (2021-22,2022-23,2023-24) before the bid opening date to any Central / State Govt Organization/PSU/ Govt. Undertaking Company.

Copies of relevant contracts (proving supply of cumulative order quantity in any one financial year) to be submitted along with bid in support of quantity supplied in the relevant financial year.

For fulfilling the Past performance criteria any one of the following documents may be considered as valid proof (a) Purchase Order copy along with Invoice(s) with self-certification by the bidder that supplies against the invoices have been executed. (b) Execution / Completion certificate by concerned buyer with order value, purchase order and order quantity and supplied quantity of the bidder.

## Buyer can ask to verify all the orders and received payment details which are submitted in the bid.

t. Bidders should provide details of service centre and information on service support facilities that would be provided after the warranty period. Manufacturer should have trained and qualified customer support staff with ample experience in the required field.

- u. DTE Rajasthan PERFORMANCE CLAUSE: If bidder had received purchase order from buyer's department in last three financial years, they have to submit the details with Purchase order and Invoice. Buyer can check the bidder's past performance in this Department. Such performance can be evaluated by the buyer and can accept or reject bid on this basis.
- v. The bidder of the offered products must have valid ISO certification ISO 9001:2015, 14001:2015, 45001:2018 up to bid validity.
- w. The bidder is required to submit the proof of registration as follows:-

Type of Company/ Firm	Copy of Certificate required	
Company (under Companies Act)	Valid Certificate of Incorporation	
Proprietorship Firm	Shop & Establishment Certificate or	
	Professional Tax Certificate.	
Partnership Firm	Partnership registration certificate of	
	registered deed of partnership	
Limited Liability Partnership	Valid Certificate of Incorporation	

## Note: The bidder must upload scanned copies of all the originally downloaded documents (Duly filled and seal-signed) of this tender only.

- 9. In absence of the above or wrongly placing the required documents in any other cover or not mentioning the desired information at the specified place/ column, the bid may not be considered and will be rejected. The provisions of RTPP Rules 2013 & RTPP Act 2012 and Finance Department, Government of Rajasthan, orders and circulars will prevail in this regard.
- (B) FINANCIAL BID (Second cover-xls):
  It should contain details of price quoted in BOQ.

## Note:- The Financial bid of only Technically qualified bidders will be opened. The date of opening of financial bid will be displayed on <a href="https://www.eproc.rajasthan.gov.in">www.eproc.rajasthan.gov.in</a>.

- (i) Bid Evaluation Criteria(Selection Method) is Least Cost Based Selection (LCBS)-L1Bidder with the **lowest cumulative value** of the financial bid i.e. (Lowest financial cost after adding the cost of all the items) shall be declared as L1 bid.
- (ii)Pre-dispatch Inspection will be carried out from the representative of this Directorate, if required by the Department. However, inspection charges will be borne by the bidder.
- (iii) Bidder has to quote all the items in the bid. Evaluation will be done on the total tender value wise. NQ or Zero quoted in the BoQ will lead to rejection of bid.
- (iv) The bid will be evaluated on total value of the bid and lowest bid (i.e. L-1) will be considered for placing supply order.
- 10. The tenderers shall quote F.O.R. destination prices only. indicating the Freight inclusive of unloading and stacking and Insurance charges in Financial/Price Bid/BOQ. They will also indicate the prevailing rates of G.S.T (exclusive) in the quoted prices. If the Financial/Price Bid/BOQ is not filled completely, the offer is likely to be ignored.
- 11. Material/Equipment on order shall be required to be dispatched on "Freight paid basis".
- 12. Before electronically submitting the tenders, it should be ensured that all tender documents enlisted above including conditions of contract are signed & sealed on each & every page by the authorized representative of the firm after filling requisite information/details desired in the specification & Qualifying Requirement.

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- 13. All tenders, in which any of the prescribed conditions are not fulfilled or which have been vitiated by errors in calculations, totaling or other discrepancies or which contain over writing in figures or words or corrections not initialed and dated, may be liable to rejection.
- 14. The supplier/ contractor shall furnish particulars to the payment making authorities of DTE in prescribed format to be provided by the purchaser. (Annexure- J)
- 15. No conditional tenders shall be accepted and will be rejected summarily forthwith.
- 16. The DTE reserves the right to cancel the tender at any time without assigning any reasons. The DTE does not bind himself to accept the lowest or any tender or any part of the tender and shall not assign any reason(s) for the rejection of any tender or a part thereof.
- 17. No refund of tender fee is claimable for tenders not accepted or forms not submitted.
- 18. Payment of Bill will be made by Director (Education), Technical Education, Jodhpur after the receipt of material and found to entire satisfaction and as per specification and good conditions mentioned there in supply order.
- 19. The supply will be accepted only on working day in the office working hours.
- 20. The Tenderer would provide Guarantee for an appropriate period from the date of delivery of the said goods in good conditions. During Course of Guarantee period, the items will have to got replaced FREE OF COST at Concerning Institute.
- Quantity of items can be increased/decreased/cancelled. Department is competent to accept/refuse the Tender/Tenders without quoting any reason thereof.
- 22. All applicable statutory deductions regarding GST, income tax etc. are to be made from the suppliers bill.
- 23. All other Terms and conditions of GF&AR and Rajasthan Transparency in Public Procurement Act, 2012, Rajasthan Transparency in Public Procurement Rule, 2013 and Finance Department, Government of Rajasthan, orders and circulars shall be applicable.

Enclosed: As Above

DIRECTOR (EDUCATION)
TECHNICAL EDUCATION RAJASTHAN
JODHPUR

#### GOVERNMENT OF RAJASTHAN

#### DIRECTORATE OF TECHNICAL EDUCATION RAJASTHAN, JODHPUR

W-6,GAURAV PATH, JODHPUR. Phone-0291-2434271Fax-2430398 Visit us: www.dte.rajasthan.gov.in e-mail ID: dte\_raj @yahoo..com

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#### "CONDITIONS OF TENDER AND CONTRACT FOR OPEN TENDER"

**Note:** Tenderers should read these conditions carefully and comply strictly while sending their tenders.

- 1. Tenders are hereby invited in e-tender system for purchase of Mechanical Lab Items. Tenders are to be submitted online in electronic format on website http://eproc.rajasthan.gov.in. The tender document/specification can be downloaded from above mentioned website
- 2.1 Any change in the constitution of the firm, etc. shall be notified forthwith by the contractor in writing to the purchase officer and such charge shall not relieve any former member of the firm, etc. from any liability under the contract.
- 2.2 No new partner/partners shall be accepted in the firm by the contractor in respect of the contract unless he/they agree to abide by all its terms, conditions and deposit with the purchase officer a written agreement to this effect. The contractors receipt for acknowledgement or that of any partners subsequently accepted as above shall bind all of them and will be sufficient discharge for any of the purpose of the contract.
- 3. Tenderer will have to submit copy of GST Registration Certificate duly attested by the Tenderer without which tender may not be considered.
- 4. Tenderer will have to submit copy of PAN CARD duly attested by the Tenderer without which tender may not be considered.
- 5. Tender forms shall be filled in ink or typed. No Tender filled in pencil shall be considered. The Tenderer shall sign the Tender form at each page and at the end including amendment sheet enclosed in token of acceptance of all the terms and conditions of the tender.
- 6. Rate shall be written both in Words and Figures. There should not be errors and or over writing. Correction if any, should be made clearly and initialed with dates. The Rates should mention element of the G.S.T. separately.
- 7. The tenderers shall quote F.O.R. destination prices only. indicating the Freight inclusive of unloading and stacking and Insurance charges in Financial/Price Bid/BOQ. They will also indicate the prevailing rates of G.S.T (exclusive) in the quoted prices. If the Financial/Price Bid/BOQ is not filled completely, the offer is likely to be ignored.

- **8.** 8.1 Preference to Local Industries Registered with the Director of Industries. Rajasthan, Jaipur over the Tendering Units, outside the State of Rajasthan as per the policy approved by the government will be operative.
- 8.2 Under the different situations between local tendering unit of S.S.I. Rajasthan and outside the State of Rajasthan the policy as laid down by the Government will be operative & rule amended up to date shall be applicable. (Amended vide Finance Department Order No. F-15 (1) FD/CSPO/9608/2000 Date 21/03/2000).
- 9. **VALIDITY**: Tenders shall be valid for a period of **90 days** from the date of opening of Tender.
- 10. The approved supplier shall be deemed to have carefully examined the conditions, specifications, size, Make and drawings, etc. of the goods to be supplied. If he has any doubts as to the meaning of any portion of these conditions or of the specifications, drawing, etc. he shall before signing the contract, refer the same to the purchase officer and get clarification
- 11. The contractor shall not assign or sublet his contract or any substantial part thereof to any other agency.
- 12.1 **SPECIFICATIONS**: All article supplied shall strictly confirm to specifications. Those articles should confirm strictly to those specification as mentioned in Schedule-'H".
- 12.2 The supply of articles marked with a struck/at serial number shall in addition, conform strictly to the approved samples(if demanded during technical evaluation). The supply shall be of the very best quality. The supply of articles should be in accordance with the samples. If any discrepancy, the decision of the buyer shall be final and binding on the tenderers.
- 13.1 WARRANTY/GUARANTEE CLAUSE: The Tenderer would give guarantee that the goods/stores/ articles would continuous to confirm to the description and quality as specified for a minimum period of 24 Months from the date of delivery of the said goods/ stores/articles to be purchased and that not with standing the fact that the purchasing entity may have inspected and/or approved the said good/stores if during the aforesaid period of 24 months. The said goods/stores/articles to discovered to confirm to the description and quality aforesaid or have determined (and the decision of the buyer in that behalf will be final and conclusive). The procuringentity will be entitled to reject the said goods/stores/articles or such portion thereof as may be discovered not to confirm to the said description and quality, on such rejection the goods/articles/stores will be at the seller's risk and all the provision relating to rejection of goods. etc. shall apply. The tenderer shall if so called upon to do replace the goods, etc.or such portion there of as is rejection by the purchase committee, otherwise the tenderer shall pay such damage as may arise by reason of the breach of the condition here incontained. Nothing here in contained shall prejudice any other right of the purchase officer in that behalf under this or otherwise.

- 13.2 In case of machinery and equipment also guarantee will be given as mentioned in clause 13 (i) above and the tenderer shall during the guarantee period replace the parts if any remove any manufacturing defect if found during the above period so as to make machinery and equipment operative. The Tenderer shall also replace machinery and equipments in case it is found defective which cannot be put to operations due to manufacturing defect etc.
- 13.3 In case of machinery and equipment specified by the purchase officer the tenderer shall be responsible for carrying out annual maintenance and repairs on the terms and conditions as may be agreed. The Tenderer shall also be responsible to ensure adequate regular supply of spare parts needed for as specific type of machinery and equipment whether under their annual maintenance and repairs rate contract or otherwise. In case of change of model he will give sufficient notice to the purchase officer who may like to purchase spare parts from them to maintain, the machinery and equipment in perfect condition.
- **14.1 INSPECTION:**Pre-dispatch Inspection will be carried out from the representative of this Directorate, if required by the Department. However, inspection charges will be borne by the bidder.
- 14.2 The tenderer shall furnish complete address of the premises of his office, godown and workshop where inspection can be made together with name and address of the person who is to be contacted for the purpose. In case of those dealers who have newly entered in business a letter of introduction from their bankers will be necessary.
- **15. SAMPLES:**If required, the bidder will have to submit samples of items after opening of technical bid on demand, this will be part of technical evaluation.
- 16. Each samples shall be marked suitable either by written on the sample or on a slip or durable paper securely, fastened to the sample the name of the tenderer and serial number of the item, of which it is a sample in the schedule.
- 17. Approved sampleswould be retained free of cost up to the period of six month after the expiry of the contract. The government shall not be responsible for any damage, wear and tear or loss during testing, examination etc. during the period these samples are retained. The samples shall be collected by the tenderer on the expiry of the stipulated period. The Government shall in no way make arrangements to return the samples. The samples uncollected within 9 months after expiry of contract shall be forfeited by the government and no claim for their cost etc. shall be entertained.
- 18. Sample not approved shall be collected by the unsuccessful tenderers. The government will not be responsible for any damage, wear and tear or loss during testing examination etc. During the period these samples are retained. The uncollected samples shall be forfeited and no claim for their cost etc. shall be entertained.

- 19. 19.1 REJECTION: Article not approved during inspection shall be rejected and will have to be replaced by the tenderer at his own cost within the time fixed by the buyer.
  - 19.2 If however due to exigencies of government work, such replacement either in whole or in part, is not considered feasible, the purchase officer after giving a opportunity to the tenderer of being heard shall for reasons to be recorded, deduct a suitable amount from the approved rates. The deduction so made shall be final.
- 20. The rejected articles shall be removed by the tenderer within 15 days of intimation of rejection after which purchase officer shall not be responsible for any loss, shortage or damage and shall have the right to dispose of such articles as he thinks fit, at the tenderer risk and on his account.
- 21. The tenderer shall be responsible for the proper packing so as to avoid damage under normal condition of transport by sea, rail and road or air and delivery of the material in good condition to be consignee at destination. In the event of any loss and breakage or leakage or any shortage the tender shall be liable to make good such loss and shortage found at the check/inspection of the materials by the consignee. No extra cost on such account shall be admissible.
- 22. The contract for the supply, can be repudiated at any time by the purchase officer, if the supplies are not made to his satisfaction after giving an opportunity to the tenderer of being heard and recording of the reasons for repudiation.
- 23. Direct or Indirect canvassing on the part of the tenderer or his representative will result in disqualification.

#### 24. 24.1. **DELIVERY PERIOD**

The Tenderer whose tender is accepted shall arrange supplies within a period as mentioned below from the date of supply order-

S.No.	Items	Quantity	Delivery Period
	As per Bid		Up to 30 days

- 24.2. At the time of award of contract, the quantity of goods, works or services originally specified in the bidding documents may be increased/decreased, but such increase shall not exceed 50% of the quantity specified in the bidding documents. It shall be without any change in the unit prices or other terms and conditions of the bid and the bidding documents.
- 24.3 If the procuring entity does not procure any subject matter of procurement or procures less than the quantity specified in the bidding documents due to change in circumstances, the bidder shall not be entitled for any claim or compensation except otherwise provided in the bidding documents.
- 24.4 Repeat orders for extra items or additional quantities may be placed on the rates and conditions given in the contract. Delivery or completion period may also be proportionately increased. The limits of repeat order is 50% of the value of original contract shall not be exceeded in any case.
- 25. 25.1 EARNEST MONEY: Tender shall be accompanied by an earnest money as mentioned in tender document, without which tenders will not be considered.

- **25.2 REFUND OF EARNEST MONEY**: The Earnest Money of unsuccessful tenderersshall be refunded soon after a final acceptance of tender.
- **25.3 PARTIAL EXEMPTION FROM EARNEST MONEY**:- Firms which arc registered with Director of Industries, Rajasthan shall furnish the amount of earnest money in respect of items for which they are registered as such subject to their furnishing registration certificate in original or Self Attested Photostat copy issued from the Director of Industries, Rajasthan at the rate of 0.5 % of the estimated value of the tender shown in N.I.T. and as per RTPP Act 2012 and Rules 2013 and finance order and circulars.
- 25.4 The Central Government and Government of Rajasthan under taking need not furnish any amount of earnest money.
- 25.5The earnest money/security deposit lying with the department/office in respect of other tenders awaiting approval or rejected or on account of contracts being completed will not be adjusted towards Earnest Money/Security Money for the fresh tenderer.
- 26. **FORFEITURE OF EARNEST MONEY(as per declaration) :** the Earnest Money will be forfeited in the following cases :
  - i. When tenderer withdrawls or modifies the offer after opening of tender but before acceptance of tender.
  - ii. When tenderer does not execute the agreement, any other formality require by Department, if any, prescribed within the specified time.
  - iii. When tenderer does not deposit the performance security Money after the supply order is given.
  - iv. When he fails to commence the supply of the items as per supply order within the time prescribed.
  - v. If the bidder breaches any provision of code of integrity prescribed for bidders specified in the Act and chapter VI of RTPP rules 2013.

#### **AGREEMENT AND SECURITY DEPOSIT (Performance Security):-**

- 27.1 i. Successful tenderer will have to execute an agreement in the **Form 17** (on non-judicial Stamp Paper of the value Rs. 500/-or as per finance order within a period of 15 days of issue of orderand deposit security equal to 5 % of the value of the stores for which tenders are accepted within 15 days from the date of dispatch on which the acceptance of the tender is communicated to him and as per finance order.
  - ii. No interest will be paid by the department on the security money.
  - iii. The Earnest Money deposited at the time of tender will be adjusted towards security amount. The security money amount shall in no case be less than the Earnest Money.
  - iv. Performance security shall be furnished in any one of the following forms
    - a. Bank Draft or Banker's Cheque or Bank Guarantee of a scheduled bank.
    - b. National Savings Certificates and any other script/instrument under National Savings Schemes for promotion of small savings issued by a Post Office in Rajasthan, if the same can be pledged under the relevant rules. They shall be accepted at their surrender value at the time of bid and formally transferred in the name of procuring entity with the approval of Head Post Master.
    - c. Fixed Deposit Receipt (FDR) of a scheduled bank. It shall be in the name of procuring entity on account of bidder and discharged by the bidder in advance. The procuring entity shall ensure before accepting the Fixed Deposit Receipt that the bidder furnishes an undertaking from the bank to make payment/premature payment of the Fixed Deposit Receipt on demand to the procuring entity without requirement of consent of the bidder concerned. In the event of forfeiture of the performance security, the Fixed Deposit shall be forfeited along with interest earned on such Fixed Deposit.
    - d. Any other instrument as mentioned in Rajasthan Transparency in Public Procurement Rules 2013.
    - e. deposit through eGRAS.
  - v. Performance security furnished in the form specified in clause (a) to (d) of sub-rule {27.1(iv)} shall remain valid for a period of sixty days beyond the date of completion of all contractual obligations of the bidder, including warranty obligations and maintenance and defect liability period.
- **27.2 FORFEITURE OF SECURITY DEPOSIT:** Security amount in full or part may be forfeited in the following cases:
  - a. When any Terms and conditions of the contract is breached.
  - b. When the Tenderers fails to make complete supply satisfactorily.
  - c. Notice of reasonable time will be given in case of forfeiture of security deposit. The decision of the purchase officer in this regard shall be final.

#### 28. INSURANCE

- i. The goods will be delivered at the destination godown in prefect condition. The supplier, if he so desired may be insure the valuable goods against lost by theft destruction or damage by fire, flood under exposure to whether or otherwise viz. (war rebellion, roit etc.) The insurance charges will be borne by the supplier and state will not be required to pay such charges, if incurred. The supplier is required to get the goods insured till 30 days after delivery.
  - ii. The articles may also be got insured at the cost of the purchaser if so desired by the purchaser. In such cases, the insurance should invariably be with life Insurance Corporation of India or its subsidiaries or as per rules.

#### 29. PAYMENTS:

- i. Advance payment will not be made.
- ii. Unless otherwise agreed between the parties, payment for the delivery of the stores will be made on submission of bill in the proper form by the tenderer to the purchase officer in accordance with G.F. & A.R. all remittance charges will be borne by the tenderer.
- 30.1 The time specified for delivery in the Tender form shall be deemed to be the essence of the contract are the successful tenderer shall arrange supplies with in the period on receipt of the firm order from the purchase office.
- 30.2 a. Delay up to the one fourth period of the prescribed delivery period. 2.5 %
  - b. Delay exceeding one fourth but not exceeding half of the prescribed period. 5.0 %
  - c. Delay exceeding half but not exceeding three fourth of the prescribed period. 7.5 %
  - d. Delay exceeding three fourth of the prescribed period. 10 %
- Fraction of a day reckoning period of delay in supplies shall be eliminated if it is less than half a day.
- 30.4 The maximum amount of liquidated damages shall be 10%.
- 30.5 If the supplier requires an extension of time in completion of contractual supply on account of occurrence of any hindrance, he shall apply in writing to the authority, which has placed the work-order for the same immediately on occurrence of the hindrance but not after the stipulated date of completion of supply.
- 30.6 Delivery period may be extended with or without liquidated damages if the delay in the supply of goods is on account of hindrances beyond the control of the tenderer.

#### 31. RECOVERIES:

Recoveries of liquidated damages short supply breakage, rejected articles shall ordinary be made from bills. Amount may also be withheld to the extent of short supply breakages, rejected articles and in case of failure in satisfactory replacement by the supplier along with amount of liquidated damages shall be recovered from his dues and the security deposit available with the department. In case recovery is not possible recourse will be taken under Rajasthan PDR Act. or any other law in force.

- 32. Tenderers must make their own arrangement to obtain import license if necessary.
- 33. If a tenderer imposes conditions which are in addition to or in conflict with the conditions mentioned in his tender is liable to summary rejection. In any case none of such conditions will be deemed to have been accepted unless specifically mentioned in the letter of acceptance of tender issued by the purchase officer.
- 34. The purchase committee/ procurement entity reserves the right to accept any tender not necessarily the lowest, reject any tender without assigning any reasons.
- 35. If any dispute arise out of the contract with regard to the interpretation, meaning and breach of the term of the contract, the matter shall be referred to by the parties to the Head of the Department who will appoint his senior most deputy as the sole arbitrator of the dispute who will not be related to this contract and whose decision shall be final.
- 36. All legal proceedings, if necessary arise to the institute may by any of the parties (Government or contractor) shall have to be lodged in courts situated in Jodhpur, Rajasthan and not elsewhere.

**DIRECTOR (EDUCATION)** 

TECHNICAL EDUCATION RAJASTHAN JODHPUR

I/We have carefully read and understood above terms and conditions (from 1 to 36) of the tender and abide by them.

I/We have also certify that all the information and catalogue etc. of the tendered item has been enclosed and no information has been held back by us.

SIGNATURE OF THE TENDERER
With seal and designation

## COMPLIANCE WITH THE CODE OF INTEGRITY AND NO CONFLICT OF INTEREST

Any person participating in a procurement process shall –

- a) not offer any bribe reward or gift or any material benefit either directly or indirectly in exchange for an unfair advantage in procurement process or to otherwise influence the procurement process.
- b) not misrepresent or omit that mislead or attempts to mislead so as to obtain a financial or other benefit or avoid an obligation.
- c) not indulge in any collusion, Bid rigging or anti-competitive behavior to impair the transparency, fairness and progress of the procurement process.
- d) not misuse any information shared between the procuring entity and the Bidders with an intent to gain unfair advantage in the Procurement process.
- e) not indulge in any coercion including impairing or harming or threatening to do the same, directly or indirectly, to any party or to its property to influence the Procurement process.
- f) not obstruct any investigation or audit of a Procurement process.
- g) disclose conflict of interest, if any and
- h) disclose any previous transgressions with any Entity in india or any other country during the last three years or any debarment by any other procuring entity.

#### **CONFLICT OF INTEREST:**

The Bidder participating in a bidding process must not have a conflict interest.

A conflict of interest is considered to be a situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliances with applicable laws and regulations.

A Bidder may be considered to be in conflict of interest with one or more parties in a bidding process if, including but limited to:

- a) have controlling partners/shareholders in common; or
- b) receive or have received any direct or indirect subsidy from any of them; or
- c) have the same legal representative for purposes of the Bid; or
- d) have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid of another Bidder or influence the decision of the Procuring Entity regarding the Bidding process; or
- e) the Bidder participates in more than one Bid in a bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which the bidder is involved. however, this does not limit the inclusion of the same subcontractor, not otherwise participating as a Bidder, in more than one Bid; or
- f) the Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the Goods, Works or Services that are the subject of the Bid; or
- g) Bidder or any of its affiliates has been hired (or to proposed to be hired) by the Procuring Entity as engineer-in charge/consultant for the contract

### <u>DECLARATION BY THE BIDDER REGARDING QUALIFICATIONS</u>

No	In relation to my/our Bid submitted to	response to their notice inviting Bid
01.	I/we possess the necessary professional, technical, competence required by the Bidding Document issu	
02.	I/we have fulfilled my/our obligation to pay such of the taxes payable to the Union and th State Government or any local authority as specified in the Bidding Documents;	
03.	I/we are not insolvent, in receivership, bankrupt affairs administered by a court or a judicial office suspended and not the subject of legal proceedings	er, not have my/our business activities
04.	I/we do not have, and our directors and officers no offence related to my/our professional conduct of misrepresentations as to my/our qualifications to experiod of three years preceding the commencement have been otherwise disqualified pursuant to debarrance.	or the making of false statements or ntire to a procurement contract within a nt of this procurement process, or not
05.	I/we do not have conflict of interest as specified Document, which materially affects fair competition	
	Date:	Signature of Bidder with seal
	Place:	Name:
		Designation:
		Address:
		Aadhar No:-
		e-mail Address:-

#### GRIEVANCE REDRESSAL DURING PROCUREMENT PROCESS

The Designation and address of the First Appellate Authority is **Director (Education)**,

#### Directorate of Technical Education Rajasthan, Jodhpur.

The Designation and address of the Second Appellate Authority is Secretary, Technical

#### Education Rajasthan, Jaipur.

#### 01. Filing an appeal

If a Bidder or prospective bidder is aggrieved that any decision, action or omission of the Procuring Entity is in contravention to the provision to the provision of the Act or the Rules or the Guidelines issued there under, he may file an appeal to first Appellate Authority, as specified in the Bidding Document within a period of ten days from the date of such decision or action, omission, as the case may be, clearly giving the specific ground or grounds on which he feels aggrieved.

Provided that after the declaration of a Bidder as successful the appeal may be filed only by a Bidder who has participated in procurement proceedings.

Provided further that in case a procuring Entity evaluates the Technical Bids before the opening of the Financial Bids, an appeal related to the matter of Financial Bids may be filled only by a Bidder whose Technical Bid is found to be acceptable.

- 02. The officer to whom an appeal is filled under para (1) shall deal with the appeal as expeditiously as possible and shall Endeavour to dispose it of within thirty days from the date of the appeal.
- 03. If the officer designation under para (1) fails to dispose the appeal filed within the period specified in para (2), or if the Bidder or prospective bidder or the Procuring Entity is aggrieved by the order passed by the First Appellate Authority, the Bidder or prospective bidder or the Procuring Entity, as the case may be, may file a second appeal to Second Appellate Authority specified in the Bidding Document in this behalf within fifteen days from the expiry of the period specified in para (2) or of the date of receipt of the order passed by the First Appellate Authority, as the case may be.

#### 04. Appeal not to lie in certain cases

No appeal shall lie against any decision of the Procuring Entity relating to the following matters, namely:

- a) determination of need of procurement;
- b) provisions limiting participation of Bidders in the Bid process;
- c) the decision of whether or not to enter into negotiation;
- d) cancellation of a procurement process;
- e) applicability of the provisions of confidentiality.

#### 05. Form of Appeal

a) An appeal under para (1) or (3) above shall be in the annexed Form along with as many copies as there are respondents in the appeal.

- b) Every appeal shall be accompanied by an order appealed against, if any, affidavit verifying the facts stated in the appeal and proof of payment of fee.
- c) Every appeal may be presented to First Appellate Authority or Second Appellate Authority, as the case may be, in person or through registered post or authorized representative.

#### 06. Fee of filing appeal

- a) Fee for first appeal shall be rupees two thousand five hundred and second appeal shall be rupees ten thousand, which shall be non-refundable.
- b) The fee shall be paid in the form of bank demand draft or banker's cheque of a Scheduled Bank in India payable in the name of Appellate Authority concerned.

#### 07. **Procedure for disposal of appeal**

- a) The first Appellate Authority or Second Appellate Authority, as the case may be, upon filing of appeal, Shall issue notice accompanied by copy of appeal, affidavit and documents, if any, to the respondents and fix date of hearing.
- b) On the date fixed for hearing, the First Appellate Authority or Second Appellate Authority, as the case may be shall,-
  - (i) here all the parties to appeal present before him; and
  - (ii) peruse or inspect documents, relevant records or copies thereof relating to the matter.
- c) After hearing the parties, perusal or inspection of documents and relevant records or copies thereof relating to the matter, the Appellate Authority concerned shall pass an order in writing and provide the copy of order to the perties to appeal free of cost.
- d) The order passed under sub-clause (c) above shall also be placed on the State Public Procurement Portal.

## MEMORANDUM OF APPEAL UNDER THE RAJASTHAN TRANSPARENCY IN PUBLIC PROCUREMENT ACT, 2012

	Appeal No of	
	Before the(First/Second Appellate Aut	hority)
01.	Particulars of appellant:	
	(i) Name of Appellant:	
	(ii) Official address, if any:	
	(iii) Residential address:	
02.	Name and address of the respondent(s):	
	(i)	
	(ii)	
	(iii)	
03.	Number and date of the order appealed against and name and designation of the officer/authority who passed the order (enclosed copy), or a statement of a decision, action or omission of the Procuring Entity in contravention to the provisions of the act by which the appellant is aggrieved:	
04.	If the Appellant proposes to be represented by a representatives, the name and postal address of the representative :	
05.	Number of affidavits and documents enclosed with the appeal:	
06.	Ground of appeal:	
	(supported by an affidavit)	, <b></b>
07.	Prayer	
	·	
	Place :	
	Date: Appellant's S	ignatur

#### ADDITIONAL CONDITIONS OF CONTRACT

#### 01. Correction of arithmetical errors:

Provided that a Financial Bid is substantially responsive, the Procuring Entity will correct arithmetical errors during evaluation of Financial Bids on the following basis:

- (i) if there is discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Procuring Entity there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected.
- (ii) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
- (iii) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (i) and (ii) above.

If the Bidder that submitted the lowest evaluated Bids does not accept the correction of errors, its Bid shall be disqualified and its Bid Security shall be forfeited or its Bid Securing Declaration shall be executed.

#### 02. Procuring Entity's Right to Vary Quantities:

- (i) At the time of award of contract, the quantity of goods, works or services originally specified in the Bidding Document may be increased or decreased by a specified percentage, but such increase or decrease shall not exceed twenty percent, of the quantity specified in the Bidding Document. it shall be without any change in the unit prices or other terms and conditions of contract.
- (ii) If the Procuring Entity does not procure any subject matter of procurement or procures less than the quantity specified in the Bidding Document due to change in circumstances, the Bidder shall not be entitled for any claim or compensation except otherwise provided in the Conditions of Contract.
- (iii) In case of procurement of Goods or services, additional quantity may be procured by placing a repeat order on the rates and conditions of the original order. However, the additional quantity shall not be more than 50% of the value of Goods of the original contract and shall be within one month from the date of expiry of last supply, if the suppliers fails to do so, the Procuring Entity shall be free to arrange for the balance supply by limited Bidding or otherwise and the extra cost incurred shall be recovered from the Suppliers.

## 03. Dividing quantities among more than one Bidder at the time of award (In case of Procurement of Goods):

As a general rule all the quantities of the subject matter of procurement shall be procured from the Bidder, whose Bid is accepted. However, when it is considered that the quantity of the subject matter of procurement to be procured is very large and it may not be in the capacity of the Bidder, whose Bid is accepted, to deliver the entire quantity or when it is considered that the subject matter of procurement to be procured is of critical and vital nature, in such cases, the quantity may be divided between the Bidder, whose Bid is accepted and the second lowest Bidder or even more Bidders in that order, in a fair, transparent and equitable manner at the rates of the Bidder, whose Bid is accepted.

## "DECLARATION BY THE TENDERERS" (S.R. 11)

I / We declare that I am
/Manufacturer/Whole Sellers/ Sole Distributors/ Authorized Dealer/ Dealers/ Sole Selling/
Marketing Agent in the Good/Stores/Equipments/Furniture's for which I/We have Tendered.
(STRIKE OFF WHICHEVER IS NOT APPLICABLE)
If, this Declaration is found to be incorrect then without prejudice to any other action that
may be taken, my/our security may be forfeited in full and the Tender if any to the extent accepted
may be cancelled.
SIGNATURE OF THE TENDERER

With seal and designation

## "G.S.T. DECLARATION"

I, Certify that the goods on which G.S.T.has been charged have not been exempted under
the G.S.T. Act, or the Rules made there under and the amount charged on account of G.S.T. is
not more than what is payable under the relevant provisions of the G.S.T. Act or the Rules made
there under.

Certifythat	we	M/s							
					are registere	ed as N	1anufactu	rer/Dealer i	n the
		(State	or	Union	Territory)	under	G.S.T.	Registration	No.

.

SIGNATURE OF THE TENDERER
With seal and designation

## PRICE CHARGING CERTIFICATE

I/We hereby certify that the rate offered in Financial bid are reasonable and justified and we are not marketing lower rates to other department on condition of the tender and contract.

SIGNATURE OF THE BIDDER WITH SEAL AND DESIGNATION

## **FORMAT OF AFFIDAVIT**

(On non-judicial Stamp Paper of Rs- 50/-)

# REAL TIME GROSS SETTLEMENT (RTGS) / NATIONAL ELECTRONIC FUND TRANSFER (NEFT)

From: M/s. .....

To,

.....

The Director (Education),

Directorate of Technical Education Rajasthan, Jodhpur.									
Sub:- RTGS / NEFT Payments.									
We refer to remittance of our payments using made through the above system to our under noted a	_	<u> </u>							
Name of Firm	:								
Full Address	:								
Mobile Number	:								
mail ID for Payment Information									
Email Address	:								
PAN Number	:								
Bankers Name	:								
Branch Name	:								
9 Digit Code of Bank (Appearing on the MICR Cheque issued by the Bank	:								
Account Type with Code	:								
Account Number (as appearing on Cheque Book)	:								
IFSC Code for RTGS									

**Signature of Bidder** with Stamp & Address

## Annexure-K (If Applicable)

### **FORMAT OF AFFIDAVIT**

(On Non-judicial Stamp Paper of Rs. 100/-)

	IS/o	Aged
years,	residing at	Proprietors/Partner/Director
of M/s	S	do hereby
solemn	ly declare that:	
a.	all items tendered by me/us in NIT No. 1/2024-25 Director(Edu.), Directorate of Technical Education, Entrepreneurial Memorandum part-II/Udhyog Aadhar issue Department of Rajasthan.	Jodhpur are included in
b.	the rebate in tender fee & earnest money is applicable to o SSI <b>MSME</b> (उद्योग आधार) units. (as per Government of Rajas	-
c.	if any discrepancy is found later our tender will be liable for of earnest money/security money deposit along with any terms & conditions.	· C
Place :	8	roprietor/ Director ory with Rubber Stamp & Date

### Authorisation certificate to be submitted by Principal manufacturer

The equipment/ Instrument/Machine is guaranteed for the period as mentioned in tender and during the guarantee period the authorized Distributor/Dealer shall replace the parts or rectify any manufacturing defect found in the machine. They are also responsible for after Sale-service during the life time of equipment/instrument/machine. In case of change of authorized Distributor/Dealer the new authorized Distributor/Dealer will be responsible for guarantee and after sale-service. In case of failure we will be responsible for providing after sale service.

**Note:-** This authorization certificate should be typed & signed with Contract person Telephone Number, Mobile Number, Email Address by the principal manufacturer on his original letter pad and scanned copy of which must be up loaded with tender otherwise concerned item of the tender will not be considered for technical evaluation.

Signature of Principal Manufacturer with rubber stamp

Name:

Designation:

Address:

Aadhar No:-

e-mail Address:-

	EXURE "L-1" MANUFACTURER'S AUTHORIZATION FORM (MAF)
To,	
{Tendering Authori	ty}
•••••	
•••••	
I/We {Name/Desi	gnation} hereby declare/ certify that
{Name/Designation]	is herby authorized to sign relevant
documents on behal	If of the company / firm in dealing with Tender:
	1 0
He/She is also author	orized to attend meetings & submit technical & commercial information
	y be requred by you in the course of processing the Bid No 01/2024-25
	For the purpose of validation, his/her verified signatures are as
under.	
Yours faithfully	
	For and on behalf of M/s (Name of the OEM)
	(Authorized Signatory)
	Name, Designation & Contact No. Aadhar No.
	Address:with seal

_	ANNEX	XURE "	L-2" N	<b>IANUFACTURE</b>	R'S AUTHO	RIZATIO	N FORM (M	IAF)		
To,										
	orate of Techn	ical Edu	ıcation							
Jodhp										
· ·	Subject: Issue of Manufacturer's Authorization Form (MAF)									
Refere	Reference No.:									
Sir,	Sir,									
a. We	a. We {name and address of the OEM} who are orignal equipment manufactrurers (OEMs)									
do	hereby aut	horize	$\{M/s$		•••••	••••••	} who is	our		
Au	thorized for N	Name of	item	•••••	to bid, n	egotiate a	nd conclude	e the		
cor	ntract with y	ou agai	inst the	e aforementioned	tender re	ference fo	r the follo	wing		
Ha	rdware/items(	s) manu	facture	d by us for Bid No	. 01/2024-25	:				
Item No.	Equipments	Qty.	Unit	Period of Comprehensive OEM Warranty (in yrs.)	Period of end of sale (in months)	Period of end of service (in yrs.)	Period of back to back support (in yrs.)			
c. Woode dec	riod mentioned e undertake the clared end of sa e undertake the clared end of so	I above.  at the ite ale for p at the ite ervice for	em/item eriod m em/item or period s offere	orehensive OEM as being quoted is/lentioned above from the being quoted is/led mentioned above d by the bidder fove.	have not bee om the date have not bee e from the da	n and is/ar of bid subr n and is/ar ate of bid s	e not likely mission. e not likely ubmission.	to be		
	Yours faithfully For and on behalf of M/s (Name of the OEM)									
Na	me, Designatio	on & Co	ntact N	o. Aadhar No.	(Author	ized Signa	tory)			

Address: -----with seal

#### **ANNEXURE - M: PROPOSAL FORMAT FOR ORGANIZATION Selection A: Organization Profile** Name of the Organization: i. ..... ii. **Registered Address** ..... (Necessary fill Tel., Fax., ..... Email, Website, etc. ..... iii. **Legal Status** S.no **Particulars** Registration no. **Date** Public Charitable Trust Act 1 2 Society under Societies Registration Act 3 Non-profit company under Indian Companies Act 1956 4 Registration under Foreign Contribution (Regulation) Act, 1976 5 Income tax registration: Under Section 12 A

#### iv. Bank Details:

Under Section 80 G Under Section 35 CCA

Any other Section/Registration

Bank Name	Account No.	Date of Opening Account

٧.	Details of the contract person							
	Name	·						
	Designation	·						
	Contact No.	·						
	E-mail	·						

vi. Members Associated with the Organization

S.no.	Name	Nationality	Occupation/ qualification	Positions held in the organization	with any	Address

#### **Selection B: Operational Background**

a. Project related to supply of these type of terms:

	Name of	Period		No of outreach Details of the		Total	Source
S.no	the	From	То	session per	Programme	Budget	of fund
	programme			month	Trogramme	Buuget	or runu

b. Staff Details (Kindly provide the details of 5 key positions in the organization)

Name of Staff	Position	Qualification	Working since

- c. Any previous association/working experience with Govt. Sector ? If yes, please provide the details:
- d. Volume of Year wise Grant Received during the last 3 years (in different projects):
- e. Name of the Donors/Funders during the last 3 Years:

Section C: Basic Documents required to be submitted along with the proposal for Evaluation

- a. Copy of Trust Deed if registered under Trust Act.
- b. Copy of Memorandum and Rules if registered under Society Registration Act.
- c. Annual Report of last one year
- d. Audited Accounts of last 3 years
- e. Organizational Chart
- f. Legal Status of the society-copy of Registration Certificate
- g. Copy of PAN/TAN Number
- h. Copy of Latest Income Tax Return Filed
- Any other document relevant to the proposal Thanking you,

Name of the Bidder:-Authorized Signatory:-Seal of the Organization:-Date:

Place:

## ANNEXURE-N: SELF-DECLARATION NO BLACKLISTING

{to be filled by the bidder on Rs. 100/- Non Judicial Stamp}

To,	
{Tendering Authority},	
In response to the Tender/ NIT:	for {Project Title}, as an Owner/
Partner/ Director of	, I/We hereby declare that
presently our Company/ firm	
unblemished record and is not declared ineligib	ole for corrupt & fraudulent practices either
indefinitely or for a particular period of to me by an	ny State/ Central government/ PSU/UT.
If this declaration is found to be incorrect them wi	thout prejudice to any other action that may be
taken, my/ our security may be forfeited in full	and out bid, to the extent accepted, may be
cancelled.	
Thanking you,	
Name of the Bidder:-	
Authorized Signatory:-	
Seal of the Organization:-	
Date:	
Place	

### ANNEXURE- O: CERTIFICATE OF CONFORMITY/ NO DEVIATION

{to be filled by the bidder on letterhead }

To, {Tendering Authority},	
	,

## **CERTIFICATE**

This is to certify that, the specifications of Hardware & Software which I/We have mentioned in the Technical bid, and which I/We shall supply if I/We am/are awarded with the work, are in conformity with the minimum specifications of the tender/ bidding document and that there are no deviations of any kind from the requirement specifications.

Also, I/We have thoroughly read the tender/bidding document and by signing this certificate, we hereby submit our token of acceptance to all the tender terms & conditions without deviations.

I/We are also certify that the price I/We have quoted is inclusive of all the cost factors involved in the end-to-end implementation and execution of the project, to meet the desired Standards set out in the Tender/bidding Documents with contract person Telephone Number, Mobile Number, Email Address

Thanking You,

Name of the Bidder: Authorized Signatory: Seal of the Organization: with contact person Telephone Number, Mobile Number,
Email Address

Date:-Place:-

## ANNEXURE- P: UNDERTAKING ON AUTHENTICITY OF ALL ITEMS and ALLIED EQUIPMENTS {to be filled by the bidder On letterhead }

To, {Tendering Authority},	
Reference:	
This has reference to the items being supplied/ quoted to you vide our bid ref. no	
dated	

We hereby undertake that all the components/ parts/ assembly/ software used in the equipment shall be genuine, original and new components/ parts/ assembly/ software from respective OEMs of the products and that no refurbished/ duplicate/ second hand components/ parts/ software are being used or shall be used. In respect of licensed operating system, we undertake that the same shall be supplied along with the authorized license certificate with our name/ logo. Also that it shall be sourced from the authorized source for use in India.

In case, we are found not complying with above at the time of delivery or during installation, for the equipment already billed, we agree to take back the equipment already supplied at our cost and return any amount paid to us by you in this regard and that you will have the right to forfeit out EMD/ SD/ PSD/ for this bid or debar/ black list us or take suitable action against us.

Authorized Signatory:-Name: Designation:

**Declaration for correct information** { To be filled by the Bidder on Rs.- 1000/- Non Judicial Stamp Paper}

То	
The Director	
Directorate of Technical Education	
Jodhpur (Rajasthan).	
Subject:- Affidavit of correct information Ref. Bid No	
Dear Sir,  With reference to above mention subject. We hereby declare	
of Firm) our company has furnished the correct information is responsible for furnishing wrong/false information in the bid.	
Thanking you, we remain.	
A	Authorized Signatory
Name:	
Ι	Designation:

ANNEXURE- R: FINANCIAL BID UNDERTAKING

{on bidder's letterhead in technical bid}

To,

Director (Education),
Directorate of Technical Education Rajasthan,

**Jodhpur- 342032** 

Reference: -

Dear sir,

We, the undersigned bidder, Having read & examined in detail, the Bidding Document, the

receipt of which is hereby duly acknowledged, I/we, the undersigned, offer to supply/work as

mentioned in the Scope of the work, Bill of Material, Technical specifications, specifications,

Service Level Standards & in conformity with the said bidding document for the same.

I/We undertake that the prices are in conformity with the specifications prescribed. The

quote/price are inclusive of all cost likely to be incurred for executing this work. The prices are

quoted as required in the price-bid given in

I/We undertake, if our bid is accepted, to deliver the goods. In accordance with the delivery

schedule specified in the schedule of Requirements.

I/We hereby declare that in case the contract is awarded to us, we shall submit the contract is

awarded to us, we shall submit the contract performance guarantee as prescribed in the bidding

document.

I/We agree to abide by this bid for a period equal to bid validity and it shall remain binding upon

us and may be accepted at any time before the expiry of that period.

Until a formal contract is prepared and executed, this bid, together with your written acceptance

thereof and your notification of award shall constitute a binding Contact between us.

I/We hereby declare that out bid is made in good faith, without collusion or fraud and the

information contained in the bid is true and correct to the best of our knowledge and belief.

We understand that you are not bound to accept the lowest or any bid you may receive.

We agree to all the terms & conditions as mentioned in the bidding document and submit that we

have not submitted any deviations in this regard.

Date:

**Authorized Signatory** 

Name:

Designation:

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# SELF-DECLARATIONAnnexure S (To be filled by the bidder)

(10 be filled by the bidder)
To,
(Procuring entity)
La management of the DID Def No.
In response to the BID Ref. No Dated for (Project Title) as an Owner/ Partner/ Director/ Authorized Signatory of
firm . If We hereby declare that presently our company/
(i) possess the necessary professional, technical, financial and managerial resources and
competence required by the Bidding Document issued by the Procuring Entity;
(ii) have fulfilled my our obligation to pay such of the taxes payable to the Union and the State
Government or any local authority as specified in the Bidding Document;
(iii) is having unblemished record and is not declared ineligible for corrupt & fraudulent practices
eitherindefinitely or for a particular period of time by any State Central government/ PSU UT.
(iv) does not have any previous transgressions with any entity in India or any other country during
the last three years
(v) does not have any debarment by any other procuring entity
(vi) is not insolvent in receivership, bankrupt or being wound up, not have its affairs administered
by a court or a judicial officer, not have its business activities suspended and is not the subject
of legal proceedingsfor any of the foregoing reasons,
(vii) does not have, and our directors and officers not have been convicted of any criminal offence
related to their professional conduct or the making of false statements or misrepresentations as
to their qualifications to enter into a procurement contract within a period of three years
preceding the commencement of the procurement process, or not have been otherwise
disqualified pursuant todebarment proceedings
(viii) does not have a conflict of interest as mentioned in the bidding document which materially
affects the fair competition.
(ix) will comply with the code of integrity as specified in the bidding document, If this declaration
is found to be incorrect then without prejudice to any other action that may be taken as per the provisions of the applicable Act and Rules thereto prescribed by GoR, my oursecurity may be
forfeited in full and our bid, to the extent accepted, may be cancelled
forfeited in full and our old, to the extent accepted, may be cancelled
Thanking you,
Name of the Bidder:
Authorized Signatory:
Seal of the Organization:
Date:
Place:



### TECHNICAL SPECIFICATION

1. The scanned copy of this annexure "H" (original downloaded) duly completed and seal signed by the bidder must be uploaded otherwise bid should not be considered. Any supplementary information may be uploaded separately.

2. Scanned Copies Items wise Original Literature/Leaflets/Catalogue correct Image as per Tender Specification enclosed, Authorization Certificate of manufacturer prescribed format (Annexure-L) etc. must be enclosed in support of your Make and Specifications otherwise concerned items will not be considered for Technical Evaluation.

3. The delivery period up to 30 days.

4. The Material will be Supplied F.O.R. at Jodhpur or Principal Government Polytechnic College, as per order List.

5. Index Page No. 1 & 2 all Document of S. No. 1 to 34 (if applicable) and other required document must be enclosed otherwise concerned Tender will not be considered for Technical Evaluation.

6. All the material supplied should be new and no item can be supplied which is refurnished.

7. The bidder should provide the instruction manual for the items for the bid is being offered and also provide training as and when required by the department.

S. No.	Name of Item with Specifications	Bhilwara	Karoli	Baran	Tonk	Hanumangarh	Nagour	Dungerpur	Dausa	Total	Specify varieations in Specifications in any, otherwise write "No variation"/ as per Specification & write Make & Model
1	FRANCIS TURBINE TEST RIG     This is a reaction turbine and this test rig shows the construction and working of Francis turbine. The system is closed circuit.	1	1	0	1	1	1	1	1	7	
	Specifications: Sump Tank: M.O.C: : MS										
	Inner Side Coating : Fiber glass lined Capacity : 300 Liter.  Tank to store sufficient water for independent circulation through the unit experimentation and arrange within the floor space of main unit.  Turbine:										
	Type : Francis Turbine										

LUZ

The setup should consis	t of 1-1 Shell and Tube Heat			657 DW	0 911TA	Banks.	
Exchanger with a cold-w	ater tank fitted with Pump, Rota		notion	7	enima/		
meter and a hot water tank	with thyristorized heater to heat		Na Page		14	ulianens.	
the water. The temperatu	re at the shell side exit point of		A P	0001 /699	0.005		
heat exchanger should be	e sensed by the RTD Pt-100/Pt-			1200	EXPONENT S		
1000. The leaving temper	rature of hot water and entry and				- William		
	water should also measure with		10.00		enzacia	6 10	
the help of Thermocouple			The state of				
PID Controller:				2011	A brings	D 10	
Input: Universal				Date distance	1197	n E 2(27 3)	
Output: 4 – 20 mA				Control	8,45d8	HARDEN,	
	ASCII/ Modbus communication				store?		
Features: Auto tuning, A	uto/ Manual Mode Facility			MOTION.	POT 22		They be good in
Control Method : Heating	ng Mode or Cooling Mode				CASULT /		To D. Williams
Range	: Field Settable				Emi-QUI		and the co
Display: 4-digit Dual D	igital Display for SV and PV			100	mm-602		ens Essenaios
Front Keypad	: Membrane Type					we of 7	THE RESERVE TO SERVE THE PARTY OF THE PARTY
Power Supply	: 230 V AC, 5 amp.		- mount	10 5-21	1508 2002	ariston.	outer Lane Comm
Bar graph	: To indicate output %				1 2 2	of Fante	out versely him
Relay Output	: Minimum 1 nos.				SecotV-1	Dente a de	CONTRACTOR
Panel Cutout	: 92 (H) x 92 (W) mm				ACCUSE OF A		1791-120-141
Operating Temperature	: 0°C to 55°C				D 17 50		The same
Control Valve:			ellos	Transaction of	The H		and Miles and
Body Type	: Globe Valve		(Set Disso)	dilw en	April Harris	1	
Nominal Size	: 15 mm,				1	7300	
Stem Diameter	: 10 mm		PERMITS.		1 70		Some Some Of
Line Connection: Flang	ed Type					wed.	1 - T - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
Packing : PTFE					Security		gratuation
Characteristics	: Equal %			-	MIX-YE		
Service	: Water				HORL OF		The second second
Actuator:			THE PARTY NAMED IN	1	TOTAL STATE		
Type	: Diaphragm Type		201	DE LES HILL	A COLUMN	in a series for	
Fail Safe Action	: extends		Septem	BEN'S	The second		
Bench Range	: 0.2-1.0 bar			-	1965	n Silver le	
Opening Action	: Air to Open				P	Sale All	Tales and a surface and a surf
I/P Converter:					FOR STATE OF		10/10/11/9
Input	: 4 - 20 mA,				the same		Total In
Output	: 3 -15 psig,	8 6		120	Resemble		Sept.
Air Supply	: 1.4 bar,		DAME OF	1	10 / 10 N		SHREET & TOTAL

Pneumatic Connection	: ¼" NPT (F),	The state of the s
Electric Connection	: DIN Square Connector	stoll pract devices a district of the plane and the
Mounting	: Vertical	1804 a restruct courses qualified to their total of our entre to ear
Temperature Transmi		he water, the elementary at the left of these points of the same
Type	: RTD – PT 100	19 Mary CT State of Disease Sel binordy requestives men
Range	: 100° C	1000 The reason temperature of he exists and and entry and
Accuracy	: ±0.5 %	The discussion of the property
Power Supply	: 24 VDC	niquevoresit to grad sit
Output	: 4 to 20 mA	PBD Controllers
Mounting	: Head Mounting	The second secon
Integrated, Heat Excha	inger:	Au 05 - \$ 10mm
Construction	: Shell & Tube type,	Communications RS 488 A SCII/ 52 dous communication
Type of Flow	: Counter current	Ecstumes: Auto tening. Auto: Manual Mode Escilit.
Material	: SS 304,	Control Method - Regul Mode of Cooling Mode
Service	: Water,	Kartes State Setable
Shell Dia.	: 100 mm,	Victorial Dead Display International Control of Section 1
Exchanger Length	: 500 mm,	Frank Keryad
Tubes : 10 - 1	4 nos. seam less minimum	10 K C DA V 352 1 10 10 10 10 10 10 10 10 10 10 10 10 1
Water Line Connection	: ½",	at an investigation of the state of the stat
<b>Cold Water Sump Tan</b>	k:	out Consumption (Consumption of Consumption of Cons
Service	: Water	White Wally and Face of the Second Land
Capacity	: 80 litters	
MOC	: SS-304,	Section 201 challengers of section of
Drain Valve	: Ball valve with handle,	Sept Make Table 5
Drain Connection Size	: 1/2",	
Suction Connection Size	: 1",	Nominal Size Seem Democrat LD dum
Material : Brass	/S.S.	
Hot Water Tank:		Emr Connection From Pape
Service	: Water	Characteristics Equal L
MOC	: SS-304,	Service - Water - Water
Capacity	: 80 litters	
Heaters: 2 kW, immersi	on type mounted on tank	Taginalaty Taginalaty
Drain Valve	: Ball valve with handle,	Tope : Displayers Lyr
Drain Connection Size	: 1/2",	bitative Visit Bit State of the Control of the Cont
Suction Connection Size	:1".	the oir Runge - 0.2-150 test
Material	: Brass/S.S.	Hope and All a
Pump:		The result of th
Туре	: Mono block,	All LGC-91
Supply Voltage	: 230 V AC,	

MOC	: SS body,	
Connection Size	: 1"	the state of the s
Nos.	: 2	The control in Spines and the control in
Rota meter:		
Service	: Water,	works set. Adminos. Catallo, carriago anticipar asset
Range	: Suitable,	and the first three three forms of the first three thr
Body M.O.C	: SS	Bellevine more than joined with a lighter habour.
Float	: SS	
Connection	: ½", : Borosilicate Glass,	Supplied in State of the State
Metering Tube Valve	: Needle type, integrated	applications but some some of the standard of denormations
	: Vertical	
Mounting Air Regulator:	. vertical	since outsite frequencial and letters we daily to have party
Service	: Air	Steriograms explain the paging frampos resimpling solviday.
Max. Input Pressure	: 10 kg/ cm <sup>2</sup> ,	CACCADE make benchmark and a section was after
Hose Connection: ¼",		
Current Meter:		a disserver of he tomps from spring and supposed
1. To indicate & measu	re Temperature Transmitter Output	- Lead possess and and guident in Lead (region from a
(4 - 20 mA),		
2. To indicate & measu	re I/P Converter Input (4 - 20 mA),	directions and longitude deal tiles said learns.
<b>Pressure Gauge:</b>		Luxole act point control (as anatolycints). Comprehensive
	supply air pressure to I/P Converter	Introductive shoot for sith to experiments are malaried to
<b>Thyristor Drive:</b>		
Rating	: 2000 W,	busing short and amenda, on pourse distribution of
Operating Voltage	: 230 V AC, /50 HZ	remaind of sales the disconnection to discount of the comment of t
Input Signal	: 4-20 mA, : To Heater of Hot water tank,	
Output	: To Heater of Hot water tank,	and land on
Heater Controller:	: PID,	Indiana Marchael Companies (Alba Marenbell
Type Input	: RTD/ TC	
Output	: 4 - 20 mA,	The Alberta and William William Committee and the Committee and th
Display	: Digital,	gets at her formal management and the second
Power Supply	: 230 V AC, 5 Amp.	
Temperature Scanne		
	D/Thermocouple	Limited by medithum their region and country of
	hannels,	
Range : 0 to	0 100 °C	
Display : 7 S	egment 4-digit LED display	
Power : 220	) V AC, 50 Hz	

Converter: Suitable Converter should be provided to connect	90   bod 82   10 july 10 http://doi.org/10.1016/july 10.1016/july 10.1
instrument with computer	The second secon
Control trainer software:	
The software package offered contains necessary	Service Waters
hardware and software required to interface the setup to a	Change Sunski, Senski,
personal computer thus creating full software controlled	Zer and a second
	The second secon
experimental and instructional environment. The package	Composition  Notesing Tabe  Borosi leate till oc
should enable students to investigate and understand the	Volume or (words) to the state of the state
principles of process control in a laboratory environment	Managang Vapaca
with the minimum technical support. Windows compatible	Air Royalator:
	Shevice An
software package has been developed using SCADA	Total Councillation of the Cou
software. This provides direct control of the processes	could/covered
(control trainer) used, including open and closed loop	Rights addition from Longing Conference of the C
control, plus multi loop configurations associated with	Am S - Hambard Wood of Section 1 Sec
remote set point control (as appropriate). Comprehensive	The second secon
	to muricipi al la company de l
laboratory sheets for all the experiments are included in	Car aron Drive
the manual with setting up information, background	2 900E
theory, operational procedures and all other relevant	Operating Voltage 1200 V M2, Strand
information.	June Street of Horizon of Harman and
	Heater Council at
Industrial SCADA software:	Dipo Option
User friendly Windows interface.	OF CITE and
Two-way communication for control and data	Founds Diental
acquisition.	Power States 200 V MC S Amp
	Temperature Seanuer
Auto-configuration with multi-port selection	Sign common T.C. 3
option.	New of Channel - Schannels

1 (O - I ) and automatic control						Wall I				127.00
Manual (Open Loop) and automatic control		2:								
(Closed Loop).						10				53-8. xiVi-
<ul> <li>Selectable P, P+I, P+D and P+I+D mode.</li> </ul>										
Bump less transfer between open and closed loop						R(v1)	47			
								-		
operation.										150 (15)
Live mimic diagrams of the process including set							1.0	11.1%		57.19
point, process variable and output.										Carrie Daniel Carrie
Dynamic multi-color data display capability								111.21		to his will be
										and adhered
(tabular, chart or graphical form).						LG ILAN	_1,1 119	a en		ed a South North
<ul> <li>Powerful graphics and trend chart capabilities</li> </ul>			× .							ternal (Sleen) 1
with customization.							a ordi			Same March
Computer & peripherals:								1		n Gril
							04	nas	41	78.1
Intel Core i3 or higher or Latest VERSION			1			bull see	MOUT THE	(media)	Trace I	arathabat only is
<ul> <li>MINIMUM 4 GB RAM</li> </ul>					1000	1971 Line		Scaline A	BROW	- dil as litano
<ul> <li>MINIMUM 17" LED MONITOR</li> </ul>									a entif	n mat suscepti
MINIMUM 500GB HARD DISK.					,700	Standard S		Details 1		Adjour !
							5F4 III	Min I		5/0
KEYBOARD AND MOUSE SET							100	DITE S		Sugar
SPEAKER SET							1.121			Talliperious and
3 COMPUTERIZED CENTRIFUGAL PUMP TEST	1	1	0	1	1	1	1	1	7	oznami-
RIG									5 13	ment of themself
Centrifugal pump test rig consists of sump tank, measuring							HESSE III			Particle Communication of the
tank, centrifugal pump, electric motor, flow meter,							100	and the pro-		Vicedistrict
transmitters and control panel with following							1000		E	Continue Dissistant
specifications.						bes			100	200704
Technical Specifications: Pump:										Shirt thing
Type : Centrifugal Pump										1796
No. of Stages : One					ti				10.7	Alex Property of Parket

LUZ

	nected to 1.0 H.P Motor	A Control salter often sage (control sage) installer .
Size : 25 n		
Max. Head : 8 me		(type 10)
Max. Flow : 10 L		Strain Coff Shark Shift For Strategies a
	se Grained Cast iron	and the factor of the control of the
Electric Motor		* Humo fish a made between upon and a fish from a
	- 240 V AC;	the state of the s
Power : 1 HF RPM : 2800		and a state of the contract of
. 2000	0 -3000	* Live manic diagrams of the process encuring our
Magnetic Flow Meter	Mounting	potat, pipeers variable and nation.
	0 LPM	s Dynami mali-color dua display cambility
Measuring Pipe Material: SS 304		State day subject the roundment durings
No of electrodes : 3 (2 measuring	g and 1 grounding)	(develop court or court or court
Electrode Material : SS 3		* Powerful graphies and used chart capabilities
Type : Com		
	- 240 V AC;	with customents as
	00 mA,	Competer & period crain
	/LED	
Display parameters : Flow	rate, Totalize flow,	CHOIC Assets for reduction to the Plant of the
Velocity of flow, % of flow, Emp	ty pipe. Detection alarm	MAN REPORTED A
Pressure transmitter:		SOTION OF THE PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS OF THE
Principle : Piezo	Resistive Measurement	A TURNET BY THE BAR THERE
	ble to pump	
	mA, 2 wire	TES SKUOM IS AN UNA REPORT OF
Power Supply : 24 V		TREAKER SET
	r ¼" BSP (M)	
Purpose : To measure th	e delivery head	COMBUTERIZED CENTRAL AT LEMETER T
Vacuum transmitter:		219
	ble to pump	Campilingal pump its and consists of a map that, measuring
Output : 4-20	mA, 2 wire	medic contributed countries and a first total and contributed cont
Power Supply : 24 V Process Connection : ½" or		1980 LG AND Iston following the authorities.
	1/4" BSP (M)	
Purpose : To measure the Sump Tank :	suction nead	Feetings Specifical responsibilities
MOC : SS – 304		
Capacity : 130 litres		Long Committee Prints

MOC : SS – 304	contrained by and distribution from the contract of the positions of
Capacity : 70 litres	should enable surfacts on investigate and endersonal the
With self-graduated glass tube level indicator & 1" drain	
valve	functions of trailers in a thougast environment with the
Energy meter	Committee of the commit
Nominal voltage: 240V Nominal current: 1 Amp or 5 Amp	
Frequency : 50Hz range +/- 5.0Hz	labella lacitati de la lacitatica se molarita amano disa-cart.
System : Single phase	L. Water droping carp ballow .
Communication : RS485	
Working temperature : 0 to 55°C	Arrenter se ab ustromo A
Display : LCD/LED	KOR23 Nepolation tally instrument with
Mounting : Panel mounting	MAN BUNK MINER
Scanner	SOUR DAUGH THE MINIM. *
Type : Digital	ASIGNED WOOD TO SELECT THE SELECT OF THE SEL
Channel : 8 channels	* TES STORING A GENERAL *
Display : Dual type	THE STATE OF
Serial communications : RS 232/ RS 485	
Mains supply : 210 – 240 V AC;	CARRATTE MARKELIOT
Display : LCD / LED	remain Select Caronic
Control Panel:	The fighting seaton should be quitted for transfer partings
On/ Off switch	
Indicator Lamp	has a payment better body model by the same same and the same same same same same same same sam
MCB for overload protection	Leave to the state temporal control and pure other sales in the
8 channel Scanner	
Energy Meter	m more elevant must
VFD to control AC motor	a the state of the
Necessary piping, valves and fittings should be	
	-ausop him annument in occurrous to should
incorporated in the unit.	The imposing a production of according
The well-designed setup shall be having suitable MS	PAC ma Rulay module:
framework with good quality paint to house the setup	
without the need of any foundation.	The sylven should also provide a simulation of
Software:	
The software package should contain necessary hardware	ANAMAR projects for the trings to similar
and software required to Interface the set up on personal	

computer thus creating full software controlled experimental and instructional Environment. The package should enable students to investigate and understand the principles of process in a laboratory environment with the				s.msto	1 16 10	ix aibn)	SH 36 on mo	may by	MOC. MOC. Capacita final Capacita Moc. Moc. Moc. Moc. Moc. Moc. Moc. Moc.
minimum technical support. Latest Windows Interface.								(Zout	totara ygrania
Two-way communication for control and data acquisition, Data display capability.					x86.2	nge II-	or 5 Amu : 50012 n Smeles	gents L:	Number of sept.
Computer & peripherals:  Intel Core i3 or higher or Latest VERSION  MINIMUM 4 GB RAM  MINIMUM 17" LED MONITOR  MINIMUM 500GB HARD DISK  KEYBOARD AND MOUSE SET  SPEAKER SET						Olimbia Colimbia Colimbia	Grand Grand Grand Grand Report	71U	Compensation Westing tempors Engley Mounting Seminer Type Chance Chance
PNEUMATIC TRAINER KIT Technical Specification: The training system should be suitable for imparting training on basic and advanced pneumatic components and systems for enhancing the knowledge and skills of trainees in the relevant field.	1	0	0	0	1	1 (1)	1 (D.J.)	duler grands	Thurst but and the control of the co
<ul> <li>The system should be suitable for trainees to have hands-on experience in pneumatic and electropneumatic circuits and wiring components to PLC and Relay module.</li> <li>The system should also provide a simulation software package for the trainees to simulate</li> </ul>				at la SM 8 until	inoria interne rati osus	egniter emyad del 121-le	naton D data sg ad Units data sala databan	A deptors view ag strained against by age traces to become	cardense property pro

pneumatic and electro-pneumatic circuits for the	
quick learning of concepts.	22.0e1.040002
보고 보안 된 레이팅 보면 없는 그렇게 되면 없다.	Personalus Component es consecuencial establishments
Description:	Comparation Comparation (1972) Compared to 1972 Compared
Supply, installation, and commissioning of	
Pneumatic and electro-pneumatic, PLC and	and the second second second is also be built in
Relay based training system with workstation	with all Toolston countries to have
and components consisting of the following	was de z one man de comité passon signife .
items:	The second secon
1. Workstation:	Dougle Acting & wholes show 20 mm. Soules
To be used from both sides with high strength metallic	
(aluminium) profile legs with four heavy-duty	* E2 W.V. Vub t Posibilizar actioned spring
lockable castor wheels, wooden work surface, one	
fixed pedestal drawer units having at least three	sold in an arrangement will be writer by the sold in t
drawers for the storage of components, each with	suppositioning vincounts of the resolution A
handles and individual locks.	
Dimensions (Approx.)	W Cos War low or board and a statement of the control of the contr
Work Table –Length 1200 mm X Width 900 mm	
X Height 900 mm including caster wheel	10 -a fetragle aview letters work out a
Drawer Unit - 01 No. Suitable Size	* 5/2 Was only over defend worteds D No.
2. Profile plate:	general Leneral a class formation of the W. S. &
With grooves on both sides with overall dimensions	The second secon
of 1100mm x 700mm (approx.), made of anodized	
aluminium, for mounting with quick fix mechanism	



of pneumatic/electro- pneumatic valves and components.	240 At some prominipal cuttors and otherwising
3. Pneumatic Component set consisting of the following:	Supplied in Turner Spins
Compressed Air Service Unit (FRL) Complete - 01 Nos.	asagnosed.
	To a movement from mornithms (ringle or con-
Manifold with 1 Input and 5 output connections	Paramete and elector-parameter HEI and
with self-locking couplings -01 Nos.	moter phase allow marks grained beaut golden
Single Acting Cylinder, 20 mm bore x 50 mm	gowellel on to addednoo anatomos him
stroke – 01 Nos.	The state of the s
Double Acting Cylinder Bore: 20 mm, Stroke:	
100 mm- 01 Nos.	To Windowskill Company of the Compan
3/2 Way Valve, Pushbutton actuated, spring	collins mate proste death (flor either nice a most because of)
return – 01 Nos.	The transfer with the serie officer eminimals are
	and waters are present a period of the control of t
3/2-way valve, roller lever spring return—01 Nos.	these populations are stated the state of th
3/2-way valve, pneumatically actuated, spring	disease, the time stone of the parties of the stone of th
return- 01 Nos.	landes and retreated to the colonial
One Way Flow control valve, adjustable- 01 Nos.	Chiega atomorphic
Two Way Flow control valve, adjustable- 01	w Work Table - Legab (200 sun X Frida 90 um.)
Nos.	X Haight 900 mm moleding coster wheelt
• 5/2 Way valve with detent switch – 01 Nos.	Deriver Cert - Bt No. Sumble Star
	And all of the state of the sta
5/2 Way Valve, pneumatically actuated, spring	antistant future of the state of the property of
return – 01 Nos.	The second secon

5/2 Way Valve, pneumatically actuated on both	telephone in the late of the second state of the second se
sides – 01 Nos.	TON 14 ON 14 the territor possessions
Shuttle Valve – 01 Nos.	mower applying Consultant 24 - out N to 199
Two Pressure Valve – 01 Nos.	second to the market him and years. S. L.
Quick Exhaust Valve – 01 Nos.	
Pneumatic Motor – 01 Nos.	The day on matter in super collection. Date of
Pneumatic vacuum generator with suction cup –	
01 Nos.	movement Limit district from Control 20
	20 THEOLD 1 SHEETED
Pneumatic Counter Balance Valve, The counterbalance valve should hold a load in	unit six event desperate. A
position until pressure is applied to move the	arcold grange SELL May after blooming feweralt.
load, Turning the adjusting screw clockwise	3/580 - 3KL 7 3K
should increase the load carrying capacity of the	* 2 Z-van sinkle" estatofd solve with numbir
valve : 1 No.	and In 1G VPS APILLA as source
Tee Joint – 05 Nos.	Openia nigo sylar branco storos com-Sic Sa
Plastic Tubing – 15 Meter.	overesti and all all 24 V.D.C. at a less
	cambination that the state and the talk to
4. Electro-Pneumatic Component set consisting of the	the makes it is a part that the component
following	tone albumit passand and an include that the com-
Power Supply Unit, Input Voltage: 230 V AC,	
Output Voltage: 24 V DC, Output Current:	5 POCompute Votation
Approx. 4.5 A, Short Circuit Proof – 01 Nos.	Continues are underly building an extended and the Au
Signal input box, electrical, consisting of three	-most mer institute the compactor stimutes
illuminated momentary contact pushbutton	



switches (each 1 No + NC) and one illuminated	disclored by a standard and the standard of th
maintained - contact switch (1 NO +1 NC),	267 1 265
power supply rail. Contact load 2A – 04 Nos.	- Stuffie Valve - Of Man
Relay unit, with 4 change – over contacts,	and the say of research and the
suitable for 24 V DC, 5 A – 04 Nos.	The state of the s
PLC Controller with programming cable- 01	entra in a super rounded state ( )
Nos.	Magning Robel - QL Not.
Electrical Limit Switch with a changeover	A Produced to Season Street, section con-
contact- 02 Nos.	806.10
Proximity Sensor— 02 Nos.	A Pricential Colleges Statement Valve Vinc.
	and the first the late of the construction of
3/2-way solenoid valve with LED, spring return,	orthonian to bodigge as make at from posteror
24 V DC – 01 Nos.	comments were appropriate to come to be a
5/2-way single solenoid valve with manual	Author change quilting beat or a main change
override and LED, 24V DC – 01 Nos.	and the second of the second o
5/2-way double solenoid valve with manual	and the management of
override and LED, 24 V DC – 01 Nos.	establic obing shows
Set of laboratory cables (4 mm) with banana	
connections and safety plugs at both ends in red	4. Electro-Proophant Component on compense of the
and blue colour in the following lengths and	analysis in the second of the
quantities: - 01 Set	A World Supply Unit, Japan Voltage 230 V AG.
	Correct Stollage, 24 V DC Output Output
5. PC/Computer Workstation:	Appendix A S. S. and Chang French 101 Mag.
The kit should be supplied with an integrated PC/	south to antinense shorttenie and may being
computer workstation with following minimum	GENERAL (1999) SHERSON WAS RESTRUCTED TO SECURITY OF THE SECUR

specifications: Intel i5 processor with 08 GB	The second state of the second second state of the second
RAM, 256 GB SSD, 19- inch or better LED	Wethern Dt Mer.
Monitor, keyboard and Mouse. – 01 Set.	William Street No. 1 No. 1 No. 1
	two Vivos of our desired and the
6. Pneumatic simulation Software: It Should be possible to	Implies office will a state of the state of
easily reproduce any lab requirement or complete system	The second of th
to simulate, analyze and troubleshoot them before hand on	And the second strategy of the second strateg
experience. Should enable to design, pneumatic as well as	
pneumatic circuits, simulate /design of a complete	K. The limiter only proved eigenings inscriptors
pneumatic circuit. With pneumatic components in the	to the local section of the section
library. Perpetual license. – 01 License	the warming potent
With pneumatic components in the library.	AN CONTRICT SCHOOL SECTION OF THE SE
Following Library should content with simulation	e unionity and a second of
software	A DOMESTICATE AND ACCURATE AND
Pneumatic and Proportional Pneumatic	a power group 1112 (authorizan).
Electric Controls	The second secon
PLC Siemens	gant of Avenue to Surface
Embedded view	and the second of the second o
Sequence Diagram	Treaser county
7. Cut Models of Pneumatic Components	an accomplishment of the control of
Single Acting Cylinder, 20 mm bore x 50 mm	and the second s
stroke – 01 Nos.	the second of th
Double Acting Cylinder Bore: 20 mm, Stroke:	The State of the S
100 mm- 01 Nos.	owie APODO 6
3/2-way valve, roller lever spring return—01 Nos.	

<ul> <li>5/2 Way Valve, pneumatically actuated, spring return – 01 Nos.</li> </ul>					- nai	(6.082 S	MACRUS V MORU		96 CB	Season -
<ul> <li>Shuttle Valve – 01 Nos.</li> <li>Two Pressure Valve – 01 Nos.</li> </ul>						102	y — ba	y M Liou ty	Mary (SS)	sousot/s
<ul> <li>5/2-way double solenoid valve with manual override and LED, 24 V DC – 01 Nos.</li> </ul>					125					de Postmanto emit entily reproduce
Pressure Gauge – 01 Nos.										to summing, mady styrruged Shed
8. The bidder must provide operations/ instructions										nano biangment
manual with the product.  9. Training is to be provided as and when needed during the warranty period.					oth m			acremane sold (0		promissio oren library Pespensi
5 AIR COMPRESSOR FOR PNEUMATIC TRIANER	1	1	0	1	0	1	1	adem di	6	campare cod #W
<ul> <li>Silent type,</li> <li>power supply: 230V, 50 Hz AC,</li> </ul>				1	U	et la la		1 00	6,	diff greater
power rating: 1HP (minimum),	H					85 W	n ou	in Post in		11.5mo alcuminari
Pressure rating: 8 bar,				189	1					Acuno Acustola
Tank capacity: 40-50 liters										emminer: 3.14
Pressure regulator,										Segment organization
Pressure gauge,			li i				samou	мито Э эл		In although Jury 1
Water separator,				13.7	mit 0		mur 6			
Power cable,										- law - with
Pressure switch		**	1		rolon		II centri	indimite.		annia e della
Safety valve								468		ismost Tax
On/Off Valve					8.0					

LISE

<ul><li>Suction Filter</li><li>Caster wheel</li></ul>				to age	The store	tent and	mir essi Limitine	endt ven	Sympodiaco
Instruction Manual							1917	remark)	Ministration of the second
6 HYDRAULIC TRINAER KIT	1	0	0	0	1	1	1	4	I brown a
Technical Specification:					Locative	Baltimo 0	salari and	5cm (1094)	BISTI XV
The training system should be suitable for imparting								10 mail	
training on basic and advanced hydraulic components and	E I					215.180	HILE CH	SU- HILL	27773044
systems for enhancing the knowledge and skills of trainees								100	
in the relevant field.									
The system should be suitable for trainees to have									Z. Proffleping
hands-on experience in hydraulic and electro-				Libring	scots II				swoone daw
hydraulic circuits and wiring components to PLC				ilized	to the	istra()		PORTING A	ani-100.11 lb
and Relay module.	150 60		- 6 -	utom	phoni z	Labourp		1 37	d marginuse
The system should also provide a simulation		- 14		. Don	Izovik?	-Wites	DYH:	presional	carbyki lo
software package for the trainees to simulate				. Hay		divorê	or vest no	LA yeriel	singmentings
hydraulic and electro- hydraulic circuits for the								Mesor in	og olderskill i
quick learning of concepts				- conf	la de	10000	of a value	100	usa formos (L)
Description:				1.5690	io mid	1 168			KILL IS (MORE)
Supply, installation, and commissioning of	F   6/4				disved.			100	to a single part
Hydraulic and Electro- Hydraulic, PLC and				100					de i hijos tolkompio
Relay based training system with workstation and				356				1	ly islist smeant
components consisting of the following items:						The second			
1. Workstation:				ninth	, security.	Allen and		Appalle.	
To be used from both sides with high strength metallic							10000000		Les milikwaise
				1.010	D 28	Chie II Chie	197 10	apoiture,	
(aluminium) profile legs with four heavy-duty				12.00		14.	2 1 10		gardolial
lockable castor wheels, one fixed pedestal drawer									

LUZ

units having at least three drawers for the storage of	100 mm 202 a
components, each with handles and individual locks.	Castery Sect
Dimensions (Approx.)	1 months targed in
Work Table – Length 1200 mm X Width 900 mm	Transcription of the control of the
X Height 900 mm including caster wheel	gentaged and address, and talenda consequences against the life.
Drawer Unit - 01 No. Suitable Size	coming on bade advanced by body and consequences
	assored to efficience above one off amounts for emounts
[20] 이 보험 전 시간 내가 되는 것 같다. [2] 그 같은	in the relevant fill its
2. Profile plate:	The example he will all for a process to buy and a second to the contract of the contract
With grooves on both sides with overall dimensions	tapage has allowabed as sundragas to about
of 1100mm x 700mm (approx.), made of anodized	1900 per la constitue de la co
aluminium, for mounting with quick fix mechanism	demonity follows
of Hydraulic/electro- Hydraulic valves and	moust entry a side one being a contract of
components Using Allen key or knob.	sinking of senioral per till allocary received
3. Hydraulic power pack:	figures and an entropy of the property of the control of the contr
(1) external gear pump having a delivery rate of 2.5 lpm,	grant of program of spiriting
(approx.) @ 1400 rpm operating pressure 60 bar, coupled	Description:
to a single-phase AC motor (230 V AC) having start	a Supply manifelion and contrastants of
capacitor and ON/OFF switch and overload protection, (2)	Hydranie and bleam Hydranies Pt. and
pressure relief valve adjustable from 0 – 60 bar, (3) oil	Ralay his sed from the system with waterstripment.
reservoir, ≥15 litres capacity having sight glass, drain	competing and surge of the following tights
screw, filter, and P and T ports.	d. Washington
4. Hydraulic Component set consisting of the	To be used bounded to deal way hear which the best of all the
following:	ends and post-tion and client temperates

Pressure relief valve, pilot-operated – 01 Nos.	and (ii) trains and parents.
Drip tray of suitable size, steel – 01 Nos.	5 Well of Well of
Pressure Gauge, Glycerin-damped, Indication	with the second
range of: 0-100 bar, Nominal diameter: 63 mm –	* Photographed Great valve, order to agent with
01 Nos.	
Four-Way distributor with five ports, equipped	familiar than the longer will a section to
with a suitable pressure gauge - 01 Nos.	Advanta intention or until 1 Nov 1 1 Nov 1 1 Nov 1 1 Nov 1
Pressure sequence valve with manual adjustment	* TiConnactor, volume Use Ling velephose apprices
rotary knob. – 01 Nos.	NA CO - Isofoto, genifepoto alimpiano
Double acting hydraulic cylinder Piston rod	wine of the wint a management of the wint as which
diameter10-15 mm, Stroke length 150-200 mm -	1000 (0)
01 Nos.	
Suitable Weight for vertical loading of hydraulic	S. Electro-Hydrastic Component ser commission of the
cylinder – 01 Nos.	(allowing:
Mounting kit for weight, for realizing pulling and	A Power superior and added a present of for an insur-
pushing load – 01 Nos.	AV ASSEMBLE NO VEN - 28 No supplemental Community of the
Hydraulic motor— 01 Nos.	James P. J. Booker, N. P. Str. 11 and p. 10 comp. 200 200
3/2-way directional control valve with hand lever	The side participal floations by the forgon of blanch
actuation. 1 No.	COVID TOURS
4/2-way directional control valve, with hand	former as the man terranseral porchio revisit we
lever actuation – 01 Nos.	2071 2010
4/3-way directional control valve with hand lever	Ciona de Torres, lambane all appendir grandit a de la
actuation – 01 Nos.	A CONTRACTOR OF THE CONTRACTOR
One-way flow control valve, adjustable by rotary	M 10 a diay be used years to 200-32 16
knob – 01 Nos.	

LISE

Non-return valve – 01 Nos.	10 PTO Interpolation of the later agreement o
Flow Divider— 01 Nos.	Trip in of spiral last, constitution of these
Pressure reducing valve: 1No	A Diseased Change Chystell the and the second
Pilot-operated check valve, pilot to open. – 01	mark of the Negrotal day seem of marks
Nos.	
Two-way flow control valve, with manual	e Court Way distributer with that parts, equipped
adjustment of flow rate. – 01 Nos.	with a smokic priseaux gatego - 0. Wos.
T-Connector, with self-sealing coupling nipples	* Present southern raive with mental adjustment
and quick coupling socket – 02 Nos.	sold Its dead vision
Measuring jar, transparent, 2 litre, with a scale—	Double sound dylamitic cylinder Peter rod
01 Nos.	mm 005-90 diameter long and 1-04 attended
	- DE 10
5. Electro-Hydraulic Component set consisting of the	attant gallos abani tanter in the Worlding .
following:	and the second s
Power supply unit, electric, suitable for an input	w Numeric & Mr. Hor bestellt, til medianty og militig mill
voltage of 85 - 265 V AC, output voltage of 24 V	cold 10 - basil gardong
DC, and output current of 4 A (Approx.). The unit	* Mydeud cupant 01 Noc
should be designed for protection against short-	S.Cway directional courses with boar lever
circuit. – 01 Nos.	notubben 4 No.
4/2-way discrete directional control solenoid	A 472-way queochique contro value, with band
valve- 01 Nos.	Jever negation - Dt Nee
4/3-way discrete directional control solenoid	associated direction of common free very loss of the common free very loss
valve- 01 Nos.	ART 10 - uniminal
2/2-way electrically operated valve – 01 Nos.	Cheve thought of the distribution of the control of

Signal input box, electrical, consisting of three	200 Brangard on the Unique of Month 200 on 1 *
illuminated momentary contact pushbutton	omensions protession and normalization a page 163
switches (each 1 No + NC) and one illuminated	specific to the course of the course of the course
maintained - contact switch (1 NO +1 NC),	AAM of the end of the end of the AMAR
power supply rail, Contact load 2A – 04 Nos.	The second secon
Relay unit, with 4 change – over contacts,	
suitable for 24 V DC, 5 A – 04 Nos.	To state described encounts for the following hydraulical
PLC Controller with programming cable- 01	yes to -retrogrammo
Nos.	- Property Consum Consum 1 Vincent
Limit Switch, electrical—02 Nos.	are the should a start of some eight Chart
Pressure switch—01 Nos.	among anied the envisors original forms and the envisors of
Proximity switch,— 02 Nos.	oN 1 - Jennana
Set of laboratory cables (4 mm) with banana	vanta ed side suits a day (one or wall server a
connections and safety plugs at both ends in red	January Marie
and blue colour in the following lengths and	of 10 =o day and a code &
quantities: - 01 Set	oVD - switz remounts removed the
Every Hydraulic component having Hydraulic High-	Thomsex Temporal Imparity Interests (1984-1986)
pressure Quick coupling connector on it so that it can	The second secon
performs various Hydraulic circuits with different	Standing relief of the Aller of the Standing o
connections.	the special design of the second seco
Assorted Hydraulic High pressure pipe should be provided	the designation of the state of
with suitable size and length with connector & First fill	the of suppliers so has broken unit too galdisper
hydraulic oil to conduct the experiments.	property teorinologies of Venture of Manager and Statement
6. PC / Computer Workstation: - 01 Nos.	the state of the second of the



The kit should be supplied with an integrated PC/	Sugar Sugar of the state of the
computer workstation with following minimum	destruction products included the technical
specifications: Intel i5 processor with 08 GB	Contained for the Library address
RAM, 256 GB SSD, 19- inch or better LED	manufact - Carlot of the half we bear to be seen and the seen of t
Monitor, keyboard and Mouse 01 Set.	The second section of the second section of the second sec
	garden Relay int, will 4 charge - ear counts.
7. Cut section models for the following hydraulic	Somble for 24 V DC, 5 A - 00 Mu
components: - 01 Set	10 -a circ polymenting ditte building crip e- 01
Pressure Gauge – 1 No.	
Double acting hydraulic cylinder – 1 No.	W. Sandi Septicle, olganizate US Nov.
4/2-way directional control valve with hand lever	words depend and the second and the
actuation 1 No.	W 20 June 19 Committee of the committee
One-way flow control valve, adjustable by rotary	Security character catrice is one visit found:
knob – 01 Nos.	Day in store offed in septimental from an alternation
Non-return valve – 01 Nos.	have distract principles out to suppose site bands
Pressure reducing valve - 1No	2 10 Selection
4/3-way discrete directional control solenoid	Every Hydraudic component having the frontic frigh-
valve- 01 No.	pressure Queck ouplany connector on it so that it can
8. Hydraulic simulation Software:	pertoms visions thydrophy enough and different
It should be possible to easily reproduce any lab	constitutes.
requirement or complete system to simulate, analyze and	Assorted Hydrau to High pressure precition if he provided.
troubleshoot them before hand on experience. Should	The real of the state of the st
enable to design, hydraulic as well as electrical circuits,	etabarrages par tarber a of the Chamberl
simulate /design of a complete hydraulic circuit. With	S. D.C. Companie Worksmitting 11. New

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hydraulic components in the library. Perpetual license. –					per g	ulim O	(O) /LE	integer of	Para salid	
01 License					. Valut zoo	(1 m) 24	dniller l	Trition	STEELS W	
With hydraulic components in the library.					30	Mount	missey	Heat, 18		ionto svitavita
Following Library should content with simulation			Pro- I		/5/00/2	ig sharo	e same	with 20		lens excounted a
software						III.O.L.	plica		auf au	firmal test from
Hydraulic and Proportional Hydraulic					D) 44	ojukare.	epulairis	on Inil	sloor g	intos pantam
Electric Controls		3			Life 6	city Jan	urarray.		e this of	figure of sectables
PLC Siemens					latte v	ileabin i	i balli l		610 M	word beautiful and
Embedded view			Her				and the		this south	a dail a nei dhea
Sequence Diagram					Mode	in old	ork train	remine C	a toma	old with a similar
9. The bidder should provide operational/ instruction		6			BACK	bying	mil elle	tonna th	el or a	with the Seffwi
manual with the product.				(Part)	large 20	Mil Look	emietu v	100	ion dies	of same boston
10. Training is to be given as and when needed during							31	elmon ed	bir Alika	microfor strator
warranty period.			1		50 B	nis cig	Capos la	gilla.D	lor(df)	emigrafi) (15 //
MULTIMEDIA BASED SIMULATOR FOR CNC	1	1	1	1	tenni	0	1 Index	1	6	committee the start
TECHNOLOGY AND INTERACTIVE CNC PART PROGRAMMING SOFTWARE					,althri	E aldel	ngin	ei dan	agborelis	or able to see 3D
Technical Specification:			1			No xhac	l-of xi	biod in	es path	Circuity holders.
Multimedia based simulator for CNC technology and		T.			-taumr	STEATED	tragaid	um 28	al Side	1. Cutting tools
interactive CNC part programming software for turning &				1	i iliab	ela ratraga	baogiti,	Good gard	orac ele	archide outping of
milling with virtual machine operation and simulation					been	mail i		of foot	ino liin	1001, 100MBH, (100M
using popular operation control system such as Fanuc,					52.81	Side and	Hirrard	parts sh	mount of	tint tole T diet
Siemens, etc. (Web based or licensed based) (09 trainees					3000	eners.		Bog B	au akh	tuill, etc. leter
+ 01 faculty) With help of this software the trainees must										gumens, ISO of
be able to Write, Edit, Verify & Simulate.		1			Byels.	molari	AT S	Engineer	25000	handled feet a
	4			100000000000000000000000000000000000000						

List

The software must enable teaching of CNC milling and	The state of the s
turning technology aligned with ITI syllabus in a highly	bears 7 in
effective manner through multimedia such as 3D	Validation of the control of the con
Interactive Graphics, videos, animations, sound, pictures	to the paint of the street and the street of
and text. Software must use video clips from actual	
machines, cutting tools and machining situations in	se unify(El Intolfring (El Intolfring)
industry, to enable the trainee to interactively learn and	Flexing Control Control
understand how CNC machines are used in industry and	PLC Sections
establish a link between theory and practice.	weiv heliberini i
2. Interactive Multimedia: Trainee must be able to interact	Soquence Djuguin
with the Software to learn concepts interactively. All	distribut Matourney, Shave a blands inched and in
content must be easily accessible by menus and links and	members with the product.
open the relevant Multimedia content.	10. Textadric is be given as any other record forms
3. 3D Graphical Objects: Critical concepts must be	As into Vibernian
explained through interactive 3D graphics - trainee must	T 263.40 FBT JORGE GASER ALGSTOTISTES
be able to see 3D objects such as Cutting Tools, Inserts,	TRUMPARTIES TO BEAUTINE THE PROCESS OF THE PROCESS
turning holders, milling cutter holders, tool parts etc.	Typhinest Specialingtions
4. Cutting tools used in CNC machines: Software must	Multimedia based simulator for 129C technology and
include turning tools, grooving tools, threading tools, drill,	increases CNC per programming follows: fire uniting 2
ap, reamer, face mill, end mill, bore, finish bore, thread	milling with violat madrine operation and sundefen.
mill, T slot mill, Countersink, chamfer mill, side and face	uning propagat abstraction washing states with an interest
mill, etc. Indexable insert geometries, cutting edge	resignation (99) (preed to agent to based do W) day, included
geometry, ISO nomenclature for inserts.	estar connect of transportation of the Eward TO
5. Tool holders: Software must include Tool holders used	Statement & Park Company of the Statement of the Statemen
n turning – turning, grooving, threading, etc. Tool holders	Mentioned a based wanted from the CVC reservor
used in milling – side lock, face mill, collet, morse taper,	

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heat shrink, floating tap holder. Each topic must be	a de la minima de la presenta de la compania del compania del compania de la compania del la compania de la compania del la compania de la compania de la compania del la compania de la compania del la compania d
explained by a text explanation, animations, and videos.	To stample to scale our conditioning contrastors with
ISO nomenclature for turning and boring holders.	Shine may 373
6. CNC milling operations: Software must include Face	The William Property of the CM Transport of the Committee of the CM Transport of the C
milling, pocket milling, side milling, chamfer milling, spot	with the first time of their lives and their
facing, helical boring, side slot milling, thread milling,	gramma som from
cylindrical interpolation, T slot milling, groove milling,	11. DMC Congruencing Software work militale C.M.
center drilling, drilling, peck drilling, deep drilling,	Programming Constant and Company of the Art and St. 1500
combination hole drilling, countersinking, counter-boring,	as the first the sales france things of grantenesses
back spot-facing, rough boring, finish boring, tapping.	the drive bontonies and same handman administration in
Each operation must be explained by a text explanation,	text explinitation, explice of the tool portion amounts are:
graphic of the tool path, animation, and video.	assemble of the state of the st
7. CNC turning operations: Software must include rough	interactive Co. programming software for
turning, rough facing, finish turning, finish facing,	VEHIT, FIRT, VERIES & SINELATE
threading, radial grooving, face grooving, parting off,	Lisuipsare must couple the cromed in monderstanding learns.
drilling, peck drilling, reaming, tapping. Each operation	CNC programming as as appartical on the LTT sylladium
must be explained by a text explanation, graphic of the tool	to the first of the substitute
path, animation, and video.	WELLEY REAL STATE ON SEASON CONC.
8. Cutting parameters: Software must include Cutting	programs in Lenny Science - Pager and Mulatin
Parameters in turning and milling - constant surface	controller furnish for our up against a least and real relication
speed, limiting spindle speed, tool wear, types of tool	Some minut allow the uniquest to asset them was to see the sound of th
wear, tool life, effect of nose radius and feed rate on	The instance of the property of the property of the most
surface finish in turning.	4. Single activate these tales are mean power to less builds.
9. CNC Machine construction: Software must include	man and many transfer of the country of the state of the
Bed, guideways, ball screws, LM guides, spindle, chuck,	anceroming and the part shirth
steady rest, tailstock, rotary table, auto pallet changer, tool	



changers and turrets. Each topic must be explained by a	in the parties of the
text explanation, animations, and videos of internals of	and the sense of the street of the sense of
CNC machines.	and the state of the company to the state of
10. Work holding used in CNC machines: Software must	6. CNC adding accounts Software take against the lace.
include tailstock, steady rest, chuck, hard and soft jaws,	may profess steams, attained by pull of belong a fellow
soft jaw boring.	incide beauty continued to be a proper facility and a proper in the continued of the contin
11. CNC Programming: Software must include CNC	cylindrical toten claims. I sint suffine, groove neithing.
Programming concepts and G and M codes, ISO	center tiniling, drilling, peak of thing, leep drilling.
programming formats, canned cycles, subprograms etc.	combination fold (hilling, compositions, or state) not and more
Each programming command must be explained with a	back spor-facing nough norms, finish secting, topping
text explanation, graphic of the tool path, animation, real	Fund operation units as explanately as a set explanation.
life video and exercises.	profile of the well publication areaston and video
Interactive CNC part programming software for	delical attention teners profess societies, grantia 2653 X 4, 1000
WRITE, EDIT, VERIFY & SIMULATE	durante constitución servicio de la constitución de
Software must enable the trainee to independently learn	Fig. suring squeezes and processy latter contegrals
CNC programming, as specified in the ITI syllabus;	duting past in the property and the property and the state of
2. Software must have the facility for the trainee to	must be required by a tour applicables. The face of the rest.
WRITE, EDIT, VERIFY AND SIMULATE CNC	prite, antinamion, and viace
programs in Fanuc, Siemens, Fagor and Mitsubishi	A Colling parameters Software trust unitaria Cutting
controller formats for turning and milling applications.	Parimeters in contrig and arother contract audies
3. Software must allow the trainee to assign cutting tools	specif, limiting griddle speed, tool week to easy mot
from an industry standard tools library, for simulation.	wear, tool life effect of near radius are teeth rate on-
4. Single software must have menu option to select Fanuc,	with the final to prome .
Siemens, Fagor and Mitsubishi CNC controller formats for	R. COC. Mariging commercion: Salaware mean include
turning and milling applications.	Liked contextops, both scrows LM meter should booked

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5. Software must debug the manually written part	and the second s
programs for program syntax errors like illegal codes,	Brib interes proposed targette and remainered attempt
cutting without starting the spindle, cutting without	Form A. copier will force B. seast link speed shall challed
specifying feed rate, not specifying program number, not	mill stepstand cutton treme to back beings
specifying program end code, not specifying tool change	- She talk to the piece control control
code, comments entered in wrong format (e.g., without	Transfer for with a comparation of the with preference of teams.
brackets in Fanuc), improper canned cycle format. Must	the Hotel stope area by where the graph and to graph and the stope area.
be suitable for Fanuc, Siemens, Fagor and Mitsubishi	has reserved been agreement and a section of
controller formats for turning and milling applications	union that squite while if
6. Software must display the nature of the syntax errors	two are come require that form specific hards are given by transport (4.1)
and list them in a single window, for easy understanding	color modern binderic that the last character grand process
of the trainee.	rodmus and
7. Line numbers in the program which have syntax errors	12. Nov manual classe of a total althoughous open als losses.
must be highlighted by clicking on the error shown in the	open ingred relative stages sense against again make
list so that the trainee can quickly correct them. During	testing grows angle and fund of this tool and bearing swing switch
syntax check, the total number of lines in the program and	in the tool stage instantial in the empire and same in tool if
the number of lines checked must be displayed.	manda
8. Tools library must have all commonly used tool types	16. Software migration on buttoe trip for pergramming
and sizes for milling, with graphical user interface for	patient and the least of the same of the control of the same of
configuration and selection – face mill, end mill, side-and-	the members of the paper of the common will
face mill, chamfer mill, T-slot mill, thread mill, ball nose	Let Tools himsing pour be confirm his by Let user - deer
end mill, drill, center drill, bore, reamer, countersink,	select or risk mine control of a folial factorism.
back-spot-face, tap.	15. Software must rove to allow as every beautiful program and the contract of
9. Tools library must have all commonly used tool types	sound sett at paratiera a displace in adequate agreement at the binner in the binner i
and sizes for turning, with graphical user interface for	The major have been been a facility of the standard being the said.
configuration and selection – turning, boring, back boring,	

dist

external grooving, face grooving, internal grooving,	of Software reads debut the authority wines part
parting, external threading, internal threading, center drill	eproprieta de mengano el mestre del describir del entre del esta d
Form A, center drill form B, twist drill, insert drill, hole	coming without staring the specific calving without
mill, trepanning cutter, reamer, tap, back boring,	tou a william mangone pin stooms and land guidhour
countersinking. Turning, boring and back boring holders	egical tool godfked that also bas manual smith as
must be configurable with ISO nomenclature.	cade, comments submed in weens formed force, without
10. Tool shape must be displayed in graphical tool path	festickets in Editor), arginiser cultured cycle former Miles
simulation - tool shape in milling, and the insert and	in samble (in fector 5 chiere, layor est Museum).
holder shape in turning.	councillo format for turning and uniting applications
11. Program editing simplified with editing functions: cut,	. Software must display the nature of the syntax errors
copy, paste, select-all, undo, find, find and replace, go to	and the three in a strate validory for electronical and tell beautiful and the control of the co
line number.	anied adv to
12. Any manual changes in tool definition such as insert	The sumbered in the particles have synthetic management of the state o
type, holder type, cutting edge length, holder length, nose	united by final the base of the control of the final at the control of the final at the control of the control
radius, nose angle and hand of the tool must be reflected	ever so that the trainer, and quickly entreed them. I wring
in the tool shape instantly in the graphic guidance for tool	bus pusigning of an englisher and that states out storage waters
selection.	the introduct of lists check district be displayed.
13. Software must have an online help for programming	8 Tools library and have all conductely used tool types
codes for Fanuc, Siemens, Fagor and Mitsubishi controller	and shops for malling with graph of used interface of the
for turning and milling applications.	bearing and selection of the base life and bearing the selections
14. Tools library must be configurable by the user – user	tice mill, cleanthe unit, I shot will through pill, bull nose
must be able to add, modify or delete tools	Interpretate draft, bose researe control line bus
15. Software must have facility to verify logical program	n at make-deny sympa
errors through graphical tool path simulation in line mode,	sequi loos help y trop opo its yard tempoyanth soo i de
filled mode and solid mode for Fanuc, Siemens, Fagor and	and a plastin over implicate if by granus will exceed the

M3

Mitsubishi controller program formats for turning and	(astronomics and burn plant on righter loss blooms
milling applications.	on arthresia Diencia elimbarada apar cometarre
16. During simulation, machining data must be displayed	The parties the reliable track mattern as a did continue
dynamically: Tool number, tool name, type of motion	and integer
(rapid traverse / feed traverse, etc.), tool coordinates,	Ye had madiful a specialist
spindle speed / cutting speed, feed rate, spindle rotation	to the second state of the second sec
direction.	CONC. stilling and harm procurating counterprocess.
17. During simulation, the current block being executed	second mind in the comment of the contraction of th
must be highlighted. Simulation must be possible in single	supplied to the supplied of th
step mode for closer verification. Software must indicate	1 - 1 . In the contract of the parameter and the particular factors of
collisions by special highlighting in the tool path	can be nothing in Faultair and Spin brighted in
simulation. Speed of the simulation must be able to be	nituative easily
controlled by an easy slider feature.	Liberill CAD grash allow quick definition of freeing
18. Software must be able to interpret and simulate ISO	agent uniform lane after in warms on the property sold cares
6983 / RS274 programming format for Fanuc 0iT,	like bole printing entilling mens and store
Siemens 828D, Fagor 8055 and Mitsubishi M70 systems	Mad surport continue of those and the second continue.
including cycles and subprogram commands.	seller rate and many admiracy and more entities as
19. Must be capable of simulating basic motions,	substitution of the properties and the state of the state
subprograms and canned cycles for turning and milling.	companies and acid service francisco ambien boson
Should simulate turning codes and canned cycles: G90,	consultation of their property and a second supplies of
G92, G94, G71, G72, G73, G74, G75, and M98. Should	combination half drilling, acquires as my proper series.
simulate milling codes and canned cycles: G81, G82, G83,	Dade spot-factor temperature (see the control of th
G84, G85, G76, G87, and M98.	A. Massagnerotta turnasi unitug op gantas Maio mesani
20. Graphical tool path simulation must show the raw	plant being comon minus vonce, never contest male,
material, finished part, tool shape. In turning, during	turning with any along upward, eduken dicing with since
simulation it must be possible to view the insert shape and	ding consuct time to ping the their charge are to



whole tool holder to scale and exact shape. Graphical	Line dance in the second secon
simulation must automatically proceed according to	contracting twitten
setting: till next motion, next tool or till end of all	breakest or any me amore as medians secretable.
operations.	realizable for any a trace of any ordered the little becoming the
Virtual machining operation	the second particular and the second particular acceptance (Street)
1. Software must facilitate trainees in comprehending	mitted a official star least feeting grating a tolerar officials
CNC milling and turning programming. Its interactive	direction
screens simplify complex machining parameters,	W. Daving strain story the contract black being expended. W.
requiring minimal learning time. Trainees can observe	must be highlighed. Simulation must be you able in suggle.
virtual machining operations on-screen, helping them to	step mode for olseer veril eagon. I grown make in lease.
understand machining, making their transition to the	are post ser of settliffed bloom ed anomilies
industry easy.	Acquisition. Speed of the constitute must be able to be?
2. Inbuilt CAD must allow quick definition of turning	another or the year on old her and an and
areas like grooves, undercuts and shafts, and milling areas	18 Software must be able to interest the somble 190-
like hole patterns, milling areas and slots.	July amed to temper summarries, 19129 ( 889)
3. Must support common milling operations: Face milling,	simple a 00th interior to our ct08 nags I (1958 smarrer)
pocket milling, side milling, chamfer milling, slot milling,	alimentin ka menge kelim bini zotovo guibeloni
side slot milling, T slot milling, spot facing, helical boring,	s
thread milling, cylindrical interpolation, text engraving,	subprograms and canned evolus for northly and militing.
center drilling, drilling, peck drilling, deep drilling, boring,	Should simulate daming codes and caunca excles 6001.
combination hole drilling, countersinking, counter-boring,	G92, G96, G71, G72, G74, G74, and M98, another and
back spot-facing, tapping, reaming, finish boring.	summer of the state of the stat
4. Must support common turning operations: Plain turning,	15 No. 1285, 1376, 587, and M98
plain facing, contour turning, contour facing, contour	rever you wade point agreement, along that lechilers 2, 45,
turning with cuts along contour, contour facing with cuts	monach finished party for stage in beging Lacation
along contour, finish turning, finish facing, threading,	time and need self-way on old using or win to reconfunts.

LUZ

radial grooving, face grooving, parting off, center drilling,	9. Sanola calculation and all stay spin har por in regulations.
drilling, peck drilling, reaming, countersinking, counter	contribute an owner structs and lancer confirmation than
boring, tapping.	thin en benius so must be also be grante divide
5. Must support tool selection from a database with all	Confidence of these ends to the base of the confidence of the conf
common cutting tools for milling: Face mill, side and face	
mill, end mill, T-slot mill, thread mill, chamfer mill,	The time of the land the time of time of the time of time of the time of t
dovetail mill, form tools, center drill, drill, reamer, tap,	and the second s
hole mill, trepanning cutter, bore, countersink, back spot-	and and a reveal of section or being an electronic Designation of the Control of
face, combination tool.	Configuration (Coverns 11) No.
6. Must support tool selection from a database with all	or ewhorston
common cutting tools for turning: Turning, boring, back	
boring, external grooving, internal grooving, face	M (2 57)
grooving, external threading, internal threading, form	· (coronauton interesta con
tools, center drill, drill, reamer, tap, hole mill, trepanning	(James C)
cutter, end mill, countersink. Including ISO holders	water by Edwards
7. Must automatically generate CNC programs with	No. 82 Three Applies Company of the Blanch of
subprograms and canned cycles to reduce program length	Charge require prepris
for Fanuc 0iT/M, Siemens 828 DT/M, Fagor 8025 T/M	Sufference and the Manager Water of the Wate
and Mitsubishi M70 T/M CNC systems.	License truncing between the truncing and in the truncing
8. Must generate CNC programs with full documentation,	Selfware attention and value and value of the state of th
including date of generation, part name and number, tool	
names, and operation names as comments, and provide	that book are represented to the second state of
cycle time sheets, operation-wise tools list, and tool path	deputer
sheets, all of which can be printed and exported as PDF or	ARROY OF THE POST
Excel files.	



9. Should calculate and display spindle power required for	L. P. W. C. Ster. A. Ver. St. Part. Bull 1991 Social Coll Actual Collection.
each operation, present the spindle power in a chart or	addition, part of their remains of minimum valuable.
graph, ensuring educational value on optimal use and	No. 10 Bridge control.
safety aspects. Show cycle times based on machine	We share evidence a next most size tool trongue world ?
parameters axes acceleration, deceleration time, spindle	control control of the state of
acceleration and deceleration time, tool change time, and	Property of the Associated Section 1999 Sect
time for miscellaneous functions.	dayanii antii, foran soolia censo allii della season anot illian linnovale
10. PC should be supplied with the following Minimum	halo mill, nepaming center, bone, engineerable, one speci-
configuration (Quantity – 01 No.)	fines, combination tool
WINDOWS 10	Its Mass suppose need scheduled through defining with all
• i5	continue totals for manage Powing breating breating transfer
8GB RAM	breing, owners providing smothal processing (use
• 100 GB HDD /1024x768 VGA,	green and company transmit, and control of the cont
OpenGL,	guinn you to a shart and percent at this line mites a face to
• 22" LED display,	content and on the prestrant of feeling age (NO) beginned to the content of
Key Board, Speaker, Mouse, and USB port.	V. Must guton Hearing generals (2VC) popular with
General requirements	dignol massauly sould be sales a bearing organic
Software must run on Microsoft WINDOWS 10	For Family BiT-Mr. Stomer's \$28 TSUM. Native 802: 1744.
License must be permanent and for lifetime.	and Missobial V 70 KM (79C volume)
Software must be protected from piracy by a network USB	8. Most security CVC programs with their document attent.
key	Indisting date of general m, pare i use and number, lock
License must be concurrent users on a wired LAN	shive q this standard and as a section dottle-que fair gentle
network.	Ains fact and lat do kelimentation parties and almost
All PCs must be in a single LAN network	sales and an experience of members and experience of the state of
	Edit Bozil
Printed user manuals must be provided	

Customized Instructor's CNC workbook must be provided The bidder must provide operational/ instruction manual with the product Training is to be given as and when needed during warranty period.					rold	ingalve it	mijuo l	as tolera arabitera	to agentaci envent tol agenings	To promine unit of the control of th
8 VAPOUR COMPRESSION SYSTEM TEST RIG Technical Specifications:  • Capacity: 1/3-0.5 Ton of refrigeration • Compressor: Hermetically Sealed 1 phase, 230V, 15A • Condenser:- Air Cooled copper tube Condenser with Variable speed fan. • The inner chamber of the calorimeter - made of Stainless Steel duly thermally insulated, Immersion type-copper cooling coil inside. • A dip type Electrical immersion heater to vary the initial temperature of the water for balancing the refrigeration effects. • Outer chamber of the Calorimeter -fabricated out of Stainless Steel Sheet. • Control Panel: - MS with Powder coated • Expansion Device: Capillary Tube/Expansion Valve • Temperature Indicator: Digital Temperature Indicator 'RTD' thermocouples in following points. For refrigerant side 1. Compressor Inlet 2. Compressor Discharge 3. Condenser Inlet 4. Condenser outlet 5. Inlet of expansion device	1	1	0	1	O same mental sant the sant th	parder for manufacture of the control of the contro	roligin north mothe for roli sa hel	throately controlled to the co	6 ser series of the series of	Specifications  Specification  Committee for a stance  Digital watehold  Line bright such  Committee for a suc

fish

7. Evaporator inlet 8. Evaporator outlet 9. For water temperature at inlet and outlet in evaporator.  Pressure measurement arrangements at 1. Compressor Inlet 2. Compressor Discharge 3. Condenser outlet 4. Evaporator inlet MS Stand: - The unit should be assembled on heavyduty angle iron base.  Refrigerant: - R-134a/Eco Friendly Rotameter for measuring flow rate of liquid refrigerant Digital wattmeter for Power consumption measurement The bidder must provide operational/ instruction manual with the product Training is to be given as and when needed during warranty period.					Learni Learni Learni Learni	haber haber sealing to the sealing sealing to the s	diade de dia	grow w and  permits grow w and grow w and  cons.  (ASSE 2.5. S15)  and and and and and and and and and an	Variativa periodici in the interest of the int
PELTON WHEEL TURBINE TEST RIG  A self-contained recirculation type unit. All the measurements are provided to evaluate the performance of the pump. The system is closed circuit.  Specifications:  Sump Tank:  M.O.C : MS  Inner Side Coating : Fiber glass lined Capacity : 300 Liter.  Tank to store sufficient water for independent circulation through the unit experimentation and arrange within the floor space of main unit.  Turbine:  Type : Pelton Turbine  Size : 50 mm  Power develop capacity : 1 KW at 1000 RPM with a flow of about 450 LPM at 25 meters supply head.  Centrifugal Pump:  Type : Monoblock	1	1	0	1	1 yearsa	O selection of the sele	tologu	of the part of the	E seinense an istoritati an istori

TIZ

Supply Voltage Pump Size Suction size 50-65 mm & Delivery size 50-65mm Pump Discharge Signature						THE LETTER AND ADDRESS OF THE LETTER AND ADD	injano.	to of a color	Edunal Seminal	timakk .	Condensus Refrigorent Refrigorent Gondensus Fige N. O.C.	
To draw the characteristics curve of Turbine.	1	1	0	1	1	0	1		1	6	- Paguell	
AIR CONDITIONING TEST RIG  Required Air conditioning test rigs for conducting experiments on a vapour compression air conditioning unit. The test rig should be sufficiently equipped for determining the unit's cop, both actual and theoretical, and performing psychometric calculations.  Compressor  Type : Hermetically sealed compressor		1	0		9.1	uns.			Period Period PC co	noonin.	Egge Compound a Range productioned Dial Size Consecution	

	Capacity : 1 to	on,	The second secon
	Power Supply	: 230 VAC,	mm & Del were less 50-95 man
	Refrigerant : R2	2/ R134 / Eco Friendly	Pump Destange South Seed of the
1/2	Condenser		Lind visited land
	Туре	: fan cooled condenser	* Roga B to Dyca numera sured o accusa coine
	Size	: Suitable to compressor	building the parties of the parties and the parties of the parties
	Tube M.O.C.	: Copper	Makes and Rupes dissector Minner Heater coursed to relice wined
	Fins M.O.C. : Alı		a Opping meter of \$2mm is used to mission the
	Motor	: FHP motor with fan blade	4), againg real-sound about to the well
	Evaporator	. The motor with the online	bital educerto di onizio in distrive Cinargal
		Scientia de	Discharge control valves by pass valve of LeLC     (Any Syndam Make) used to control the flow
	Size	: Suitable to compressor	Control of the second of the s
	Tube M.O.C.	: Copper	De delle bond elle service de la Margial de
	Fins M.O.C. : Alt	uminum .	host subbery could be flow a parametrial orie ratio
	Flowmeter		and El Count was not drive and unique to indicate
	Type	: Glass Tube Rotameter	Country purely in Swring and one and states
	Fluid	: Refrigerant R22/ R134	* Options introduction of
	Range	: Suitable to compressor	Experimental Combilings
	Gauges		and in The authorities the efficiency of the bins.
		: Bourdon tube type	TO ARE COMPARING SECTION OF THE CONTROL OF THE CONT
	Туре		Requires Air confinement for the for
	Compound & pres		conduct ne experiments of a vipour
3/9/9	Range	: Suitable to H.P. and L.P.	compression aur conditioning that. The restrig
	measurement		guint metable of the paragraph of the self-through
6	Dial Size : mi	inimum 2"	portional per poyal contained page and making
	Connection: 1/4"	/ 1/8"	Compressor
			Type Type I Itemierally said
			1088900000

Alle

Energy meter Nominal voltage	: 240V	Tomorro da carrett mivels remanda e
Nominal current	: 1 Amp or 5 Amp	accepts of the control of the contro
Frequency System	: 50Hz range +/- 5.0Hz : Single phase	6.000 600 7 5 - 3 4
Working temp.	: 0 to 55°C	E plant in the second of the board of
Display	: LCD/LED	
Mounting Temperature indic	: Panel mounting	
Туре	: Digital	constants of the following shifting
Nos. Channel: Min	imum 8	mis professor of the plan. Of the lates, of the other files
Display	: LCD /LED	and an appropriate that it includes the
Power Supply	: 230 V AC	ar acomorphy and the first retransmission of
Input	: J-type Thermocouple/RTD	and the second s
Mounting	: Panel Mounting	poets and you not but hope. A
Boiler		x Congress Page Conness of MOV. On Off
Purpose : Pro	ducing steam for humidification	search foreigning the contraction library
process		mit but
M.O.C.	: SS	
Heater	: 1 KW minimum	
With steam service	valve, pressure relief valve.	Ligar Sycards Street at Ligars on the Market and Light
Air Duct		diama en dus cottinues entante bian a ne bestiante
Size	: 300 mm x 300 mm x 1500	Calent. The ups shoped use temporaryled gap strengths.
mm long in two par	t	a military and of the same of
M.O.C.	: MS	and a first of the state of the
Insulation	: armor	and Street entrained Containing
		countries and a service of the servi



Expansion device: Thermostatic expansion valve or capillary system		1.00	XORE .		
• L.P. – H.P. cutout switch	THE SHOE	14,980	1 4152		
Finned air heaters with control for heating &			22 m 1) n	1700	
			Intella		
de-humidification     Wet & dry bulb thermocouple for measuring		en inuica	u tauci ve	ecollegi su	
inlet & outlet air in evaporation			limerel :		
Thermocouples to measure compressor,			- Kati	nunctó de	
condenser and evaporator temperature		03	i dian		
Anemometer for air velocity measurements in		- 50	V-085:	1/6	
air duct	CERecon	iom will	report.		
Axial fan for air flow duct		ppens)	Monail I		
Control Panel : Consists of MCB, On / Off				No.	
switch, Indicating lamp for compressor heater	The sale shows	101-B	Betz gris	liberd 1	
and fan.			1		
			22.4		
		cominio	WOLL		
The whole set-up should be well designed and	aviev l	often one	ve, press	ervice va	
arranged on a rigid structure painted with industrial					
Paint. The unit should one time complete gas charging		OF Z II	in 00£ s		
with working condition.				may may	
The bidder must provide operations/ instruction			MS	P. Bur	
manual with the product			morro.		
Training is to be provided as and when needed during warranty period.					

YRS

11	SINGLE CYLINDER DIESEL ENGINE TEST RIG	1	1	0	1	0	1	1	1	6	G Acordinal - 1	
	Specifications: The Single Cylinder Diesel Engine Test	(Cabe	10 12					24			touri yksuse - In	
	Rig will determine BHP, Mechanical & Thermal Efficiencies, Air-Fuel Ratio, Specific Fuel Consumption		1			imbo	Olym Y	Mark Int (I)	i panteka	Block St	Lord Lag F	
	and Heat Balance Sheet at various loads.		0.00		- 1		lebone l	odar Brit	Editori HVen and	in sel na	W. DELETT	
	Type of Engine: 4 Stroke Vertical Diesel engine		1,43				SCHOOL SELL	Service Pare	Linear States	THE REAL PROPERTY.	Aberrah	
	No of Cylinder: one		-	-	-	deta	- TO 18	97 - New	mile 2 is	12/15	about Inspect	
	Rated power: 5-8 HP	he en		MAG	of 200	100	-	0.016		Institut S	no himself a filbr	
	Rated Speed: 1500 RPM	17.34				8000	specifical (	d bland	e follow r	milme 3	IT per like at	
	Loading Arrangements: Rope brake	1				100	o hall a	10000000	Salving B	ale some of	Mus papape & Mall	
	dynamometer with Spring Balance (Provision		1				Armind September	herritaria herritari	Place of	Photomic Resident	ACTION AND PROPERTY DAYN'T	
	for cooling the drum using water)	1		19.5	P.	4.44	off-time	le fond	7 - 9000	grand del	and to make the	
	MEASUREMENTS:	1			10 .			-Imma		Laren.	Station at limit	
	Fuel Intake: Fuel Tank 3 to 5 litre										Healer Assembl	
	capacity/Burette/3-Way Cock	10-01			1	100	100		Standin		and the second	
	Air Intake: Air Tank/Orifice Plate / Manometer  The state of the left Continuing to the state of the sta	F	100				W. a.					
	<ul> <li>Temperature: Engine Jacket Cooling inlet / Engine Jacket Cooling Outlet, Exhaust Gas</li> </ul>							th.	FEMALE:		ALC: ROBO	
	Outlet and Ambient.	1				1 1	wildiw b	se liu	benefit :		- Inge	
	INSTRUMENTATION:			14		P. C.		1 3	SET CO.	1 143	Diameter	
	Temperature: Multipoint Digital Temperature	1	14				1				Test Speciation:	
	Indicator with Thermocouples			la Paris			1	1 2				
	Cooling Water (Engine Jacket): Glass tube	16.				100	68.		BILL HUSE		Manager	
	Rotameter		199.0		100	out as	Papping a	and ad	m 05 :	1	loste blild	
	Speed: Digital RPM indicator with Proximity sensor										, distantes solidos	
	Exhaust gas calorimeter	HE TE	The se			odi De	L'sides.	red mon	Mil. 22	BY-1	Ashestos :	
	EXPERIMENT AL CAPABILITIES:			1000				100	F ARL I		heater association	
	BHP/SFC/Economical Speed Test/Brake			1000	0	Could be	eatur i	or as	tree OI		Wooden State	
	Thermal Efficiency, Volumetric Efficiency	1000	100	1,377				100				
	Heat Balance Sheet/Mechanical	1		1							- Administration	
	<ul> <li>Efficiency/IHP measurement (With Device For Drawing P-V Diagram).</li> </ul>		H			Post Vit	THE CALL	ad separate	Mire p. Di	etgam) - "	Four Nes of C	
	The equipment will be self-contained in all respect				1		2				School and additional	
	including vibromounts/stop watch/manual etc.									Thurs	of annihimanity for	

	sturdy base. The bidder sl maual with tl Training is to during warra	be given as and when needed nty period.					100	d result dans laure dans	Lucialis Lucialis Isantis Stantis Stantis	i dini 6 penarbo li secret li secret fi silosi 2	tion toda Sheet of France	T renons correspondent succession condent to sept t	ALX IX ont lang they put mached one steen	
12		ty of a Composite Wall/ Fix Slab	1	1	0	1	1	1	1	1	7			
	M.S. Square tube fram with instrumentation a conductivity of a Com	rking model should be housed on a ne and powder coated metal panel and able to determine thermal aposite Wall/hear transfer co-vith a control Panel Stand-alone					15	olasor (f)	po broli Balouce woon o i juse	EPM Sense Ri Sense on usua 18s Light 2 I	Arragedor Destrondo Ay the dea MUNITA	e band pared a survey compat form of the AMA monora		
	Make	: Standard					180	Hone M.	ametrus	Her Deng		tied at A		
	Capacity	: 1000 Watt						Abini ar	toob a	ion sm		- Estingers		
	Туре	: Round Coil, sandwiched		Maria.				1 Challe	Lái, fili	O Jane	Li enceri	outgitte brink?		
	Diameter	: 300 mm								7000		REGE		
	Test Specimen:		lu.				6	n sarestro	T. Junge	i moqi	Marin Marin	Legipon.		
	Diameter	: 300 mm			100				350	(COOLUMN		Company of the Compan		
	Mild Steel	: 20 mm on both sides of the						indin 281	(Onto)	al sign	Winds the	gmico 3 dminos		
	heater assembly,							Proximi	diffw 101	i itali le	des borgo	I Insert		
	Asbestos heater assembly,	: 15 mm on both sides of the						8	inne	menar LCAPA	THERE	Estate ESCHOOL		
	Wooden Slab	: 10 mm on both sides of the				1		Bunke mension	nest la Majora	sale fissi	A 17 YEAR OF THE PARTY OF THE P	Telegraph (		
	heater assembly,								famin	ndpoleti	The state of	in sh		
	Four Nos. of 'C' cla	mps to compress the assembly to		12.50			200	Mark Str.	anWy to	INTERNAL PROPERTY.	STATE OF	Prayers.		
	remove air gaps.		1		1		1		ir bonus	110 7190	of the to	transport of the same		
	Temperature Scanne	r							bert else	- COM	a morno	y godine		

Type	: Digital				pidath	titarik:			- gagagiti	
Channel	: 8 channel			initgif	Buck	ledick.			resp. (Ci	
Display	: Dual type							- veh	CVS on subject	
Input type	: 4-20mA/Thermocouple/RTD	5 3 5	PRO	- 34	Teens	Oper No.			Sinys X aug R	
No. of Input	: 8 nos.		1	1570	18 30	9 p. 1			denité royant	
Serial communications	: RS 232/ RS 485			1 82 10g	dis Peri	toi a F		180	But graps	
Protocols supported	: MODBUS ASCII & RTU			- 2	ne i mii	maild			Reput Variable	
Power	: 220 V AC, 50 Hz	1000		tour (	10 SP &	THEP		A TOTAL	Pinter Course	
Energy meter						0.86	wiDan.	-rugici	Орызваць Гошр	
Nominal voltage	: 240V		1111			<i>-</i>		return	Frager store Se	
Nominal current	: 1 Amp or 5 Amp	A to like			bushep	E to A			Make a state	
Frequency	: 50Hz range +/- 5.0Hz				डा क	SYZ TO			1997	
System	: Single phase		1			a.			Nos.	
Communication	: RS485			1				1.50	Spiner Famels	
Working temperature	: 0 to 55°C								results w	
Display	: LCD/LED							esiting)	BUIDO .	
Mounting	: Panel mounting			1			(limit	R-Oyners	printing Williams	
PID Controller:				No. 13	174		Sign	N/OPI	install a la	
Input	: Universal			-				a votage	variable #	
Output	: 4 – 20 mA			100				rillo	1907 1990 A	
Communication	: RS 485 ASCII/ Modbus			B.C.VII			inger S		Softwares	
communication			1946	L. Carrier		istoric	Jersii li	dektosa	The subward	
Features	: Auto tuning, Auto/ Manual			80.00	for side	and the	o absmi	-	is our sussiburd	
Mode Facility				Pottor			P unasco	1	nersonal comme	
Control Method	: Heating Mode or Cooling			desire				Document	ons thromisogen	
Mode								1		

Range	: Field Settable	Preparation of the Property of	
Display	: 4-digit Dual Digital	To made as	- Living D
Display for SV and PV		Sprit Hope	Display
Front Keypad	: Membrane Type	ETH Squoon mafTham - ETH	aggrund
Power Supply	: 230 V AC, 5 amp.	200.81	No. of Topar
Bar graph	: To indicate output %	20 St. 18	Strait communication
Relay Output	: Minimum 1 nos.	BURBINS VSCH WELD	Provinceds supported
Panel Cutout	: 92 (H) x 92 (W) mm	230 V RC 50 Ex	Power
Operating Temperature	: 0°C to 55°C		Energy motor
Temperature Sensors:		240V	Nominal collage
Make	: Any Standard	A Anna of S Anna	Nominal Content
Туре	: 'j' type/RTD	\$30.2 opo \$102.	Programmy
Nos.	: 8	Simple paies	Symple
Control Panel:		10 mg   10 mg	Communication
Mains		9735-110	militaryan ng napawa
On/Off Switches		(Light)	esquit.
Dimmerstat (0-5)	Amp),	Parel a founting	yetmodd
8 Channel SCAN	NER		radio omo 2.015;
Energy meter		lis origin)	tegal
Pid controller		740 (C) - 4	Output
Software:		RS 483 ASCHE Niches	soft sameno3
	offered contains necessary		e obsessimentos
The Addition of the Addition o	quired to Interface the set up on	Study Survey Study Spring Study S	Feature -
	reating full software controlled		Mode Family
	onal Environment. The package	Making Mach early office	Contail Malaca

List

	should enable students to investigate and understand the principles of process in a laboratory environment with the minimum technical support. Latest Windows Interface. Two-way communication for control and data acquisition, Data display capability.  The whole assembly is covered with Wooden Chamber with Perspex Cover on one side and Formica on all the other sides.  The total set up should be mounted on base plate with powder-coated panel and a good quality painted stand.					6.13	(2) (2)	a (d)	o ac(G) 2 are sello tom sole form sole democratic envisions areas sole areas sole	Let salley anterest anterest anterest common let Them but The public salley and salley and salley and salley	control services of contro
13	Thermal Conductivity of a Metal Rod Specification: The working model should be housed on a M.S. Square tube frame and powder coated metal panel with instrumentation and able to conduct standard experiment to determine Thermal Conductivity of a Metal Rod. The experimental set up consists of the Copper metal bar, one end of which is heated by an electric heater while the other end of the bar projects inside the cooling water jacket.ne cylindrical shell filled with the asbestos insulating powder surrounds the middle portion of the bar. The temperature of the bar is measured at different sections from while the radial temperature distribution is measured by separate thermocouples at two sections from	1	1	0	1	hos	1 same- sami) i eto fami intelvi ii	amutid ter woll to ridge a linguo star my	I special de la company de la	7 value of the second of the s	Construction of a construction
	the center of the rod in the insulating shell from the heater end of the metal rod. The cold-water inlet temperature and outlet temperature also indicated on meter.  The heater is provided with a Dimmerstat for controlling the heat input. Water under constant head condition is circulated through the jacket and its flow rate and temperature rise are noted.  TECHNICAL SPECIFICATIONS:					modus	142) Income	List Min Silver Min	CONACE Valva Conace State	CALAN	PALOTE SA SE COMPACITO & COMPA

.

	Metal Bar: Material: Copper, Size: 25 (D) x 600 (L) mm., Test length: 300 mm. Insulated Shell:Material: MS, Size: 100 (D) x 550 (L) mm. Insulation: Asbestos powder Thermocouple Position:  No. of thermocouples mounted on the Bar: 6					The State of	niles co macer w ms. [ed.		afa.i	organe, lang	should enable so principles of pro- printings techni- tive sony contra Dead dealso can	
	<ul> <li>(viz. 1-6)</li> <li>No. of thermocouples in the insulation shell: 4</li> <li>(viz. 7-10)</li> <li>Water Inlet Thermocouple: (viz. 11)</li> <li>Water Outlet Thermocouple: (viz. 12)</li> <li>Heater: Type: Coil/Bend Ni-chrome wire</li> <li>Suitable Water Pump for water circulation</li> <li>Water Tank: 18 SWG SS sheet, Size: 60 liter.</li> <li>Temperature Sensor: thermocouple with Digital</li> </ul>					nin III	asig sa	not br	n obsest muon s ap boog	io no sev	I he whole need with Pempes Co other sides The total set no powder contact pr	
	Temperature display Power Supply: 220 V AC, 5 amp. CONTROL PANEL:  Mains, On/Off Switch, Dimmer-stat, Energy Meter  Measuring flask for water flow rate The set up will be mounted on a suitable MS frame Structure with attractive color and control panel of good powder coating. The detail-operating manual will be provided with the setup. Training is to be provided as and when needed during the warranty period.					in mag ingu ingu agir o ai as morit	the part of the pa	ar Egligd frains ins marker describes		in all the arrivers of the control o	Electrostem 1st Specification 1st Specification 1st Specification 1st Specification 2st Specification of Specification 1st Specification 1	
14	PLATE TYPE HEAT EXCHANGER WITH  COMPUTER CONTROL  Technical Specification: PID Controller: Input : Universal Output : 4 - 20 mA Communication: RS 485 ASCII/ Modbus communication Features: Auto tuning, Auto/ Manual Mode Facility Control Method : Heating Mode or Cooling Mode	1	0	0	1	1 and	ola ner talio to icano reinoct nortica basis	ibili edu A naven o best	o Polonico los sell' sellicos policis polonicos los los ro colorios polonico		the centry of the feeter cont of the feeters and fine mitter.  The heavy man is you the feeter was a great the feet man to consider of the man tentile of the feeters and the	

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Range	: Field Settable			N TA	Office	MU-SU:		Flore Classons
	igital Display for SV and PV			TRIES	d may	16574		Plate Shirtchia.
Front Keypad	: Membrane Type					SHIP.		Threshill, issland
Power Supply	: 230 V AC, 5 amp.				100	a sulfique at	FOR THE STATE OF T	Protected residuals
Bar graph	: To indicate output %		1500		100	2 88 5	1	Test Paulour
Relay Output	: Minimum 1 nos.					DETE.		- mary Transactive
Panel Cutout	: 92 (H) x 92 (W) mm		 100					
Operating Temperature	: 0°C to 55°C	to the cold	 10-10-1	- 15	1		Zur'T vi	neversity tray
						Sales,		Savage
Control Valve:					1			CAPACITY OF STREET
Body Type	: Globe Valve					W. S. 7 P.		301
Nominal Size	: 15 mm,			institute)	due silve	to the R		sola Valendo
Stem Diameter	: 10 mm			19.00	1	7-97	1975	Divis Comercia
Line Connection	: Flanged Type				1 2	1.14	mark to	Substitute Contracts
Packing	: PTFE				2	Hotels III		Lorent M.
Characteristics	: Equal %			1			199	
Service	: Water	1 1 × 10				160		for Units Wiles
						mi677 c		907-107
			1/1			105/53		Theby.
Actuator:					2	1909L03		- vitisemp -
Type	: Diaphragm Type			sirm) in	i distribution	di oggi in	presonation	World Contents
Fail Safe Action	: extends			aibond				avla Vancai
Bench Range	: 0.2-1.0 bar					1	Size	Drug Connected
Opening Action	: Air to Open						out the	Source Chemical
I/P Converter:			100	F75 151	1	Selection 1	THE PLAN	In our
Input	: 4 - 20 mA,			1				
Output	: 3 -15 psig,				. 33			Tomas T
Air Supply	: 1.4 bar,				135et	anuMa	1000	1000
Pneumatic Connection	: ¼" NPT (F),		100	W Di	- 157	Voit	178 8	Supplied Victoria
Electric Connection	: DIN Square Connector				-	654.78		The state of the s
Mounting	: Vertical		E.V.	-			1350	Compension Stre
<b>Temperature Transmit</b>	ter:	Yall Line Vision	1915	hi les				
Type	: RTD – PT 100							
Range	: 100° C			Mark To				Rota meter:
Accuracy	: ±0.5 %			7	Toba //			SONTER
Power Supply	: 24 VDC	TOTAL STATE OF THE			Sum		1	Type St
Output	: 4 to 20 mA				196			2017
Mounting	: Head Mounting				32	4.1		
Plate Type Heat Exchai		7 3 5 - 1			4317			

Filz

Plate Thickness	: 0.5-0.6 mm	THE STATE OF THE PROPERTY OF T	
Plate Material	: ASTM A240 TP 316	Without A tol so part by all bits ag 6-ho velged	
Gasket Material	: NBR	poetstaged the state of the sta	
Design Pressure	: 6 kg/ cm2	The supplies of the supplies o	
Test Pressure	: 8 kg/ cm2	of tropic or participation of the control of the co	
Design Temp	: 90 °C	and complicated the property of the control of the	
No. of Plates	: 16-20 nos.	Start Cutous Start (A.S.R. Start (B.S.R. Start )	
Cold Water Sump Tank		Appending Lamp summer	
Service	: Water		
Capacity	: 80 litters	control Valves	
MOC	: SS-304,	print askill to a sprinted	
Drain Valve	: Ball valve with handle,	Concept Size 15 min	
Drain Connection Size	: 1/2",	man 01 and other Diameter	
Suction Connection Size	: 1",	Digital Type Comeaning	
Material	: Brass/S.S.	artist goods	
		Implication of the second of t	
Hot Water Tank:		TuleW Substitute	
Service	: Water		
MOC	: SS-304,		
Capacity	: 80 litters	Action to the second se	
Heaters : 2 kW, immersion	on type mounted on tank		
Drain Valve	: Ball valve with handle,	Figure 1 points / section	
Drain Connection Size	: 1/2",	and O. C. Lington and A. C. Company and A. C. Company and A. C. C. Company and A. C.	
Suction Connection Size	:1",	page to the page of the page strange	
Material	: Brass/S.S.	(2. Convertors	
		Alt 65 - Al	
Pump:		might 3-15 pigin	
Туре	: Mono block,	to Supply 10	
Supply Voltage	: 230 V AC,	neumane Connection   W. N.P. (Fig.	
MOC	: SS body,	Secrete Compartion - DIN-Selaim Community	
Connection Size	: 1"	latinoV gridano)	
Nos.	: 2	Compactance Transmittee	
		THE REPORT OF THE PARTY OF THE	
Rota meter:		59,60	
Service	: Water,	State	
Range	: Suitable,	Supply States	
Body M.O.C	: SS	Juguet	
Float	: SS	partino light and a partinoth	
Connection	: ½",	Party Type Hard Backhard	

Metering Tube	: Borosilicate Glass,		Alte estimate analysis othered countries and seeking
Valve	: Needle type, integrated		was a destination for the part service and occupied
Mounting	: Vertical		
			applied the entire of the source and the difference to the source of the
Air Regulator: Service	: Air		dynamical and restrict many constraints and beneathing to
Max. Input Pressure	: 10 kg/ cm <sup>2</sup> ,	2.	lens orders div
Hose Connection	: 14",	- 10	
Tiose connection			principles of production of the nearly conviounies.
Current Meter:			with the maximum technic war and Wagner own of the control of the
1. To indicate & measur	e Temperature Transmitter Output		Add to joing becomes one out eaching marine
(4 - 20 mA),			
2. To indicate & measur	re I/P Converter Input (4 - 20 mA),		software. This provides their outside of the processor.
Pressure Gauge:			trainer trainers was a hubble appearant former
	upply air pressure to I/P Converter		their leasts of area median good of the stife, lotters
	apply an pressure to a consequence		
Thyristor Drive:			timate set point from all a appointaire. Comprehensive
Rating	: 2000 W,		an her night our standments in belle for those protected
Operating Voltage	: 230 V AC, /50 HZ		- Linux plant beimus les ou units sons lamait al
Input Signal	: 4-20 mA,		
Output water tank,	: To Heater of Hot		theory, operational purcellars and all other respond
Heater Controller:		THE P.	mi smanon.
Туре	: PID,		
Input	: RTD/ TC		
Output	: 4 - 20 mA,		
Display	: Digital,		
Power Supply	: 230 V AC, 5 Amp.		Industrial SCADA sellor urgs
Temperature Scanner	: D/Thermocouple		Solite in Paulo Wyline in askille
Input : RTI No. of Channel : 8 ch			Socialization of Artificial and Arti
	100 °C		Later Loc letters and manufactures of two will see the
	gment 4-digit LED display		as recons
	V AC, 50 Hz		
Converter:			e formate timedime dies mornationales
	be provided to connect instrument		, 00890
with computer			
Control trainer softwa	re:		

The software package offered contains necessary hardware and software required to interface the setup to a personal computer thus creating full software controlled experimental and instructional environment. The package will enable students to investigate and understand the principles of process control in a laboratory environment with the minimum technical support. Windows compatible software package has been developed using SCADA software. This provides direct control of the processes (control trainer) used, including open and closed loop control, plus multi loop configurations associated with remote set point control (as appropriate). Comprehensive laboratory sheets for all the experiments are included in the manual with setting up information, background theory, operational procedures and all other relevant information. Industrial SCADA software: User friendly Windows interface. Two-way communication for control and data acquisition. Auto-configuration with multi-port selection option.

XIST

•	Manual (Open Loop) and automatic control						
	(Closed Loop).						
•	Selectable P, P+I, P+D and P+I+D mode.						
•	Bump less transfer between open and closed loop						
lar ea	operation.						
•	Live mimic diagrams of the process including set						
	point, process variable and output.	- N					
•	Dynamic multi-color data display capability						
	(tabular, chart or graphical form).				1986		
•	Powerful graphics and trend chart capabilities	1964 . (47)		1			
	with customization.						
Comput	ter & peripherals:				128 1		
	Intel Core i3 or higher or Latest VERSION					134	
	MINIMUM 4 GB RAM						
	MINIMUM 17" LED MONITOR						
	MINIMUM 500GB HARD DISK						
	KEYBOARD AND MOUSE SET		-				
	SPEAKER SET	Belline					
	il-operating manual should be provided with the						
setup.		A STATE OF THE STA	138				
Training	is to be provided as and when needed during the period.						