

**Khwaja Fareed University of Engineering &
Information Technology, Rahim Yar Khan**



Tender Document

Tender No. Lab-095

**Supply & Installation of Lab. Equipment for Chemical
Engineering Department**

at

**Khwaja Fareed University of Engineering
& Information Technology
Rahim Yar Khan**

TENDER DOCUMENT

TENDER No. Lab-095

Supply & Installation of Lab. Equipment for Chemical Engineering Department

at

Khwaja Fareed University of Engineering and Information Technology

TENDER PRICE Rs. 3000/-

Last date of submission: _____

FOR OFFICE USE ONLY

Serial No _____

Sold to: M/S _____

Date of Sale _____

Bank Challan No. _____

Date _____

1. Overview

Khwaja Fareed University of Engineering & Information Technology, Rahim Yar Khan intends to purchase “**Supply & Installation of Lab. Equipment for Chemical Engineering Department**” as provided at **Annex ‘A’**. The supplier will be responsible for Supply, delivery, commissioning of all specified items, wherever required, at the Khwaja Fareed University of Engineering & Information Technology, Rahim Yar Khan. This document provides complete instructions for bidders intending to participate in this Tender.

2. Instructions for Bidders

2.1. Response to the Tender (Bid) should be submitted in one part which shall include two separately sealed envelopes of **Technical Proposal** and **Financial Proposal** before **12:00 PM** on **23-06-2018**. Technical Proposals will be opened on same day at **12:30 PM** in the presence of representatives of responding bidders, if any, and Financial Proposals will be opened after completion of technical evaluation. The exact time and place for opening of financial proposals will be informed to technically qualified bidders.

2.2. Responding bidder shall deliver two sealed copies of the bid. Each copy being physically separate, bound, sealed and labeled. Proposals shall be delivered at the address given below.

Procurement Department

**Khwaja Fareed University of Engineering & Information Technology
Abu Dhabi Road, Rahim Yar Khan.**

Tel. # 068-5882420

2.3. Any queries regarding this proposal should be directed to the designated Technical Contact Person listed below.

Engr. Dr. Javed Iqbal, HoD Chemical Engineering Department

Email: javed.iqbal@kfueit.edu.pk, Tel. # 068-5882464

2.4. All bids must be submitted by filling the **Annex ‘B’**. Same should be enclosed in the financial proposal. Bidder must use the same numbers and labels used in this Request for Proposal.

2.5. The original Tender Document duly signed and officially sealed by the bidder must be submitted in whole with the proposals. Any conditional, ambiguous, incomplete, supplementary or revised offer after the opening of tender shall not be entertained.

3. Technical Proposal Format

Bidders are required to include the following documents/information in their technical proposals in the order given below:

- i. The Name and Address
- ii. Profile of company (Including Financial Profile)
- iii. List of Previous/Current customers of related designing, composing and printing of prospectus, with contact person and telephone/fax numbers.
- iv. Detailed product design information
- v. Copy of National Tax Registration Certificate
- vi. Copy of Sales Tax Registration Certificate
- vii. Bank letter of financial standing
- viii. An affidavit on Rs 100/- Stamp Paper that currently they are not black listed or debarred by any Government/Semi-Government Department to participate in bidding and to supply equipment. Failure to submit such affidavit may lead to disqualification.
- ix. Any additional information the bidder may like to furnish e.g. repair/maintenance other concerned facility
- x. Detailed item specifications matched corresponding to the BOQ as given at **Annex 'A'**
- xi. Detailed project implementation schedule/Completion Schedule which includes the delivery of items mentioned in the BOQ
- xii. Signed and stamped Tender document
- xiii. Bank Draft of the Earnest Money

4. Financial Proposal Format

Financial Proposal must include the following in the order given below:

- i. Equipment prices duly entered on the form in the attached BOQ
- ii. Validity period of the quoted price
- iii. Any other Terms and Conditions

5. Terms & Conditions

- 5.1. This invitation for bids is open to all national original Manufacturers/ Distributors/Suppliers in Pakistan for Supply of Lab Equipment.
- 5.2. All prices should be quoted in Pak Rupees and inclusive of all Government Taxes & Levies.
- 5.3. A bank draft equal to 2% of the estimated cost should accompany the Tender as **Earnest Money** drawn in favor of **KFUEIT Rahim Yar Khan**. The Tender shall not be considered without Earnest Money. Bank guarantee will not be accepted. Bank draft for Earnest Money should be placed with the Technical proposal.
- 5.4. Earnest Money for bidders not selected will be returned a minimum of two weeks after announcement of award and returned to successful bidder after signing the contract. If the selected bidder fails to sign the contract within stipulated time, Earnest Money will be forfeited.
- 5.5. A Bank draft of 5% of the total amount as **Performance Guarantee** will be provided by the supplier in favor of KFUEIT, Rahim Yar Khan within 10 days after decision of award of contract along with judicial stamp paper of the value 0.25 % of total cost which shall remain valid for 12 months beyond delivery period. This performance guarantee will be released after the completion of warranty/guarantee period, along with the satisfactory completion report by the Head of Chemical Engineering Department and inspection committee which will be intimated to the Seller and the Director Procurement KFUEIT, Rahim Yar Khan for their onward issuance of No Objection Certificate (NOC) for the release of performance guarantee.
- 5.6. KFUEIT Rahim Yar Khan reserves the right to accept / reject any or all proposals without assigning any reason thereof.
- 5.7. The quantity of an order may vary depending on the quoted prices and the allocated funds.
- 5.8. The decision of the KFUEIT procurement committee will be binding on all concerned and will in no case be challenged in any forum.
- 5.9. KFUEIT Rahim Yar Khan reserves the right to modify the conditions / specifications of the Tender Document with written intimation to all the participants who have purchased the Tender Document.
- 5.10. Delivery period will be 45 days from the date of issuance of purchase order/supply order.

- 5.11.** Delivery shall be completed according to the agreed upon schedule.
- 5.12.** In case the selected bidder fails to execute the contract strictly in accordance with the terms and conditions laid down in the contract, the Performance Guarantee shall be forfeited.
- 5.13.** The University will get the item inspected at KFUEIT Rahim Yar Khan and reject the item, if not found according to the stated specifications.
- 5.14.** The University reserves the right to claim compensation for the losses caused by delay in the delivery of equipment.
- 5.15.** It is the sole responsibility of the bidder to comply with local, national and international laws.
- 5.16.** In case any supplies/material is found not in conformity with the specifications provided in the tender, either on account of inferior quality, defective workmanship, faulty design, faulty packing or is short supplied, or wrongly supplied, the supplier will replace the same free of charges or pay the full cost of replacement.
- 5.17.** All the proposals submitted will become the property of the University.
- 5.18.** All prices should be valid for at least 60 days. Withdrawal or any modification of the original offer within the validity period shall entitle the KFUEIT Rahim Yar Khan to forfeit the Earnest Money in favor of the KFUEIT Rahim Yar Khan and/or putting a ban on the future inquires or taking any other suitable action against the bidder.
- 5.19.** Delivery of the items will be free of charge at Khwaja Fareed University of Engineering & Information Technology, Rahim Yar Khan during the office hours with a copy of Delivery Challan.
- 5.20.** Items being ordered should be brand-new and according to order specification from the current production and covered under normal warranty/guarantee etc. as mentioned in the quote. Brochures mentioned and product details must be attached.

6. Tender Evaluation Criteria

All bids shall be evaluated on technical and financial merit. The Company Evaluation Criteria is attached at **Annex 'C'** for reference. Technical evaluation process may include, but not limited to the consideration of the following with respect to the functional requirements given ahead:

- a. Technical specifications of proposed item

b. Company Profile

- I. Age of the company
- II. Financial strength of the bidder

Financial Evaluation process will be based on the consideration of the quoted price.

7. Undertaking

On behalf of the company it is certified that we agree to the all the Instructions and Terms & Conditions given in this Tender Document

Name of bidder.....

Authorized person.....

Authorized signature.....

Stamp.....

Office Address.....

Tel No

Fax No

**Supply & Installation of Lab. Equipment for Chemical Engineering
Department**

Sr. No	Item Name	Specifications/Minimum Requirements	Qty.
01	Solid Liquid Extraction Equipment (Computer Controlled)	<p>Following Equivalent or Better Specification Computer Controlled Extractor 9 cells rotor diameter: approx. 200mm speed: approx. 0...9h-1 motor power consumption: approx. 0,9W Spiral conveyor max. feed rate: approx. 20L/h motor power consumption: approx. 4W 4 peristaltic pumps max. flow rate: approx. 25L/h at 300min-1 and hose 4,8x1,6mm 3 heaters power consumption: approx. 330W Tanks extraction material: approx. 5L extraction residue, solvent, extract: each approx. 20L Measuring ranges flow rate:: 1x 0,025...0,5L/min conductivity: 4x 0...20mS/cm temperature: 4x 0...50°C</p>	01
02	Fixed and Fluidized Bed Equipment (Computer Controlled)	<p>Following Equivalent or Better Specification Computer Controlled 2 test tanks length: 550mm inside diameter: 44mm scale division: 1mm Material: PMMA Diaphragm pump (water) max. flow rate: 1,7L/min max. head: 70m Diaphragm compressor (air) max. volumetric flow rate: 39L/min max. pressure: 2bar Tanks water storage tank: approx. 4L compressed air accumulator: 2L Measuring ranges pressure (water): 0...500mmWC pressure (air): 0...200mmWC flow rate (water): 0,2...2,2L/min</p>	01

		flow rate (air): 4...32L/min	
03	Penetration Study Apparatus with Grease Box	<p>Following Equivalent or Better Specification</p> <p>Length of metal rod =16 inch Dia of ss rod = 1.25 inch Dia of bottom support plate = 8 inch Thickness of plate = 1 inch Brass needle = 01 No L = 150 mm (115 +5+ 15 + 4+11), Collar = 5 mm each, Nozzle = D =12mm, L = 15 mm, Hole = 1.5 mm Needle adjustment mechanism Silver bar L = 200 mm, Thickness= 45 mm, W = 58 mm Grease Box = D=70mm, L = 47 mm</p>	01
04	Flash Point Tester	<p>Following Equivalent or Better Specification (Pensky-Martin Type) Pensky Marten cup Two electrical heaters around the cup Temperature control system Agitator mechanism Natural gas control system Control panel Approximate dimension 9 x 12 x 3 inch</p>	01
05	Reid Vapor Pressure apparatus	<p>Following Equivalent or Better Specification</p> <p>Pressure gauge 2" dia, Range = 0-1.0 bar Total length of tube = 15 inch Dia of tube = 2.0 inch Length of upper tube = 10 inch Length of lower sample tube = 3 ¼ inch Material of construction = brass with nickel chrome</p>	01
06	Softening Point apparatus	<p>Following Equivalent or Better Specification</p> <p>Glass beaker 1000 ml Dia. Of the upper plate = 4 ¾ inch Total length inside the beaker = 5.0 inch Two hole for sample = ¾ inch Inside plate length = 4 inch, Breadth = 3 inch Length of SS rod = 5 ½ inch Solid balls 8mm Dia of beaker = 4.0 inch Thermometer =01 No.</p>	01
07	Bernoulli's Principle apparatus	<p>Following Equivalent or Better Specification</p> <p>Complete apparatus to perform four experiments Flow rate: 27 L/min Inside diameter of Venturi inlet: 26 mm Inside diameter of Venturi throat: 16 mm Inside diameter of Venturi Outlet: 26 mm</p>	01

		Pressure tapings: 11 Manometer Scale: Millimeters Manometer tube range: 0 to 290 mm Drain valve beneath storage tank	
08	Sedimentation Apparatus	Following Equivalent or Better Specification Complete Apparatus with all standard accessories With three tubes No. of tubes = 05 Dia of tubes = 3.0 inch Length of tubes = 4 feet H = 18 inch, W = 42 inch, L = 24 inch Dimensions of tube rod container = L xW xH = 48 x 10 x 42 inch	01
09	Perfect Gas Expansion Apparatus	Following Equivalent or Better Specification Capacity: 25 L Material: Glass With Pressure Vessel and vaccuum Vessel	01
10	Dew Point Hygrometer	Following Equivalent or Better Specification ASTM Standard Bench Top	01
11	Variable Temperature Controller	Following Equivalent or Better Specification Sealing temperature range = 125 - 200 °C in 1 °C increments Sealing time range 1 - 9 second in 0.5 second increments Warm up time to 170 °C < 10 minutues Dimensions = 210 x 300 x 430 mm ³ (W X D X H) Weight = 7.5 kg	01
12	Hot Plates with Magnetic Stirrer	Following Equivalent or Better Specification Top Plate Surface-D 7.25 (18.4 cm) Heating Surface Material Ceramic Top Plate Surface W-7.25 (18.4 cm) Hertz-50/60 Operating Temp Range-C 5 degree to C 540 degree centigrade Stirring speed Range-60 to 1200 Equivalent or Better	01
13	Kneader Mixer	Following Equivalent or Better Specification Suspensions Pastes Light Plastic Masses Two arms sigma design Covered trough Energy meter Equivalent or Better	01
14	Jaw Crusher	Following Equivalent or Better Specification Jaw Size = 3 inch approx. Feed Size = 1.5 - 2 inch Crushing Size = 8 mm (Max.)	01

		Revolutions = 330 RPM (Approx.) Motor = 2.5 kW, 3 Phase AC Material of Construction should be Casted steel and mild steel	
15	Paddle Mixer	Following Equivalent or Better Specification Capacity 2-5 Kg	01
16	Hammer Mill with Set of Screens	Following Equivalent or Better Specification - Rotor - It consists of a series of disks, mounted on the driving shaft, and bearing hammers made so as to operate as blades too. - Drive A.C. motor with inverter that permits the optimal selection of the rotation speed, according to the product. Continual speed regulation from 1100 to 2400 rpm. Dimensions of crushing chamber = 180 x 80 mm Maximum chargeable sample = 30 mm Rough crushing size = 2mm (Approx.) Crushing capacity = 180 kg/hr Motor = 0.4 Kw Power supply = 3 Phase Revolutions (RPM) = 1700 - 2000	01
17	Magnetic Separator	Following Equivalent or Better Specification Capacity 2-10 Kg Equivalent or Better	01
18	End Runner Mill	Following Equivalent or Better Specification Capacity 2-5 Kg Equivalent or Better	01
19	Edge Runner Mill	Following Equivalent or Better Specification Capacity 2-5 Kg Equivalent or Better	01
20	Oil Expeller Screw Type	Following Equivalent or Better Specification Oil Expeller Screw Type	01
21	Flow Through Particle Layers	Flow Through Particle Layers	01
22	Reverse Osmosis apparatus	Following Equivalent or Better Specification Reverse Osmosis apparatus Capacity 1 ton	01
23	Batch Reactor	Following Equivalent or Better Specification Frame Size, L = 44-inch, Width = 27-inch, Height = 38 inch L Key Bend = 2 inch Electrical Panel: H = 16 inch, W = 9 inch, L = 14 inch Storage Tank Plat farm: L = 17-inch, W= 8.5 inch, H=14 inch No. of Tank = 02 (Caustic solution, Ethyl acetate) Dia of storage tank = 6.0 inch, H=10 inch, Plate D = 8 inch	01

		Batch reactor (H=10 inch, D=150mm) Feed hole =02 No, One hole for conductivity meter, Heater = 500 W, L=10 inch round Thermocouple = 8 inch	
24	Cooling Crystallization apparatus	Following Equivalent or Better Specification Cooling Crystallization apparatus	01
25	Cake & Depth Filtration	Following Equivalent or Better Specification Cake & Depth Filtration	01
26	Plug Flow Reactor	Following Equivalent or Better Specification Temperature indicator 1 Controller (Electric heater) On-off switch for pump 1 On-Off switch for pump 2 Indication light for pumps Heater on / off switch Heater indication lights Power supply indication Main switch (Earth leakage) ACCESSORIES: No. of reactors 01 No. Point for probe of conductivity meter 01 No. Point for thermocouple 01 No. Raw material inlet Point for drain of reactor LAY OUT OF PANEL DIMENSIONS OF PANEL = 24 x 42 (Inches) DIMENSIONS OF ELECTRICAL PANEL = 16 x 16 x 12 (Inches) Storage tank 02 No (10 liters each) Pump for raw material 02 No Water tank with electric heater 01 No (4 x 15 inches) Electric heater 2000 Watt	01
27	Liquid-Liquid Mixer	Liquid-Liquid Mixer	01
28	Redwood Viscometer I & II	Following Equivalent or Better Specification Panel Box L=12 inch, H=5.0 inch, W=5.0inch with Back cover Inner components Transformer for agitator Agitator (gear motor) 50 RPM Agitator speed control =01 No. (10 to 50 RPM) Breaker 10 Amp Relay for heater ON / OFF push button Indicating lights = 3 No. (Heater, Power supply, agitator)	01

		<p>Front Box Overall dimensions 12 x 12 inch Top steel cover = 12 x 12 x 0.75 inch Gauge = 22 Temperature control system Digital Controller = 48x48, Thermocouple = 4.0 inch Oil bath of ss 10 x 10 x 4 inch L x Wx H Top bend = 1.0 inch Oil bath base MS 12x12 inch At Front bottom open area H=7.5 inch, W=7.0 inch Bottom sheet SS 12x12 inch Oil cup specifications (Copper) Red wood viscometer 1 (Dia. Of hole = 1.5 mm) Red wood viscometer 2 (Dia. Of hole = 3.0 mm) Outer dia of cup = 50 mm, Collar = 2.0 inch+ 2 sooter Length of cup = 4.0 inch Screwed part = ½ inch screwed L=¾ inch Oil stopper for each cup 01 No. Total = 02 No Electrical heater 1000 Watt, SS Cooling mechanism Drain valve</p>	
29	Cannon CT 500F Viscometer	<p>Following Equivalent or Better Specification Standard Laboratory Scale Bench Top</p>	01
30	Engler Viscometer	<p>Following Equivalent or Better Specification Silver water Bath Outside dia. Of the water bath = 6.0 inch Height of water bath = 3.5 inch Inner oil cup (Brass) Hole = 3mm, Outer dia = 4.0 inch, H = 3.5 inch Cover brass = 4 x 1 inch Electrical heater at the bottom the water bath Round type Dia = 4.0 inch, watt =500 Silver Ring with stand Outer diameter =7.0 inch, Inner diameter = 6.0 inchse Stand length = 12.0 inch, Quantity = 3.0 No. Thermometer Heater cover = Yamaha air filter cover Inside cover 4.0 inch asbestos insulation is placed For electrical connection contactor 2x2</p>	01
31	Cloud point & Pour point apparatus	<p>Following Equivalent or Better Specification The apparatus overall dimensions are 10 x 10 x 6 ½ inch No. of glass tubes with stopper = 04 No. Length of flat glass tubes = 6 inch Diameter of flat glass tubes = 1.0 inch No. of SS tubes in the ice box = 04 No.</p>	01

		Length of SS tubes = 4 ½ inch Dimensions of internal ice container = 8 x 8 x 4 ½ inch Material of construction of ice container = SS	
--	--	--	--

**Annex
'B'**

**Supply & Installation of Lab. Equipment for Chemical Engineering Department
(Bid
Form)**

Sr. No.	Item Name	Qty.	Unit Rate	Total Price (inclusive of all taxes, installation and Shipment charges)
01	Solid Liquid Extraction Equipment (Computer Controlled)	01		
02	Fixed and Fluidized Bed Equipment (Computer Controlled)	01		
03	Penetration Study Apparatus with Grease Box	01		
04	Flash Point Tester	01		
05	Reid Vapor Pressure apparatus	01		
06	Softening Point apparatus	01		
07	Bernoulli's Principle apparatus	01		
08	Sedimentation Apparatus	01		
09	Perfect Gas Expansion Apparatus	01		
10	Dew Point Hygrometer	01		
11	Variable Temperature Controller	01		
12	Hot Plates with Magnetic Stirrer	01		
13	Kneader Mixer	01		
14	Jaw Crusher	01		

15	Paddle Mixer	01		
16	Hammer Mill with Set of Screens	01		
17	Magnetic Separator	01		
18	End Runner Mill	01		
19	Edge Runner Mill	01		
20	Oil Expeller Screw Type	01		
21	Flow Through Particle Layers	01		
22	Reverse Osmosis apparatus	01		
23	Batch Reactor	01		
24	Cooling Crystallization apparatus	01		
25	Cake & Depth Filtration	01		
26	Plug Flow Reactor	01		
27	Liquid-Liquid Mixer	01		
28	Redwood Viscometer I & II	01		
29	Cannon CT 500F Viscometer	01		
30	Engler Viscometer	01		
31	Cloud point & Pour point apparatus	01		

TOTAL: _____

Total In Words: _____

Company Evaluation Criteria

1. Basic Evaluation

- i. Profile of company complete in all respect including financial profile
- ii. List of Previous/Current customers, Purchase Orders of related Services with contact person and telephone/fax numbers.
- iii. Copy of National Tax Registration Certificate or Copy of Online Taxpayer Verification
- iv. Copy of Sales Tax Registration Certificate or Copy of Online Active Taxpayer
- v. Bank letter of financial standing issued after date of publishing of tender/Bank Statement issued after date of publishing of tender
- vi. An affidavit on Rs 100/- Stamp Paper issued after date of publishing of tender which illustrate that currently they are not black listed or de-barred by any Government/Semi-Government Department to participate in bidding. Failure to submit such affidavit may lead to disqualification.
- vii. Detailed item specifications or Services matched corresponding to the BOQ as given at **Annex 'A'**
- viii. Proposed delivery, response time, plan for rendering service
- ix. Signed and Stamped Complete Tender document
- x. Bank Draft of the Earnest Money

Note: Basic Evaluation Criteria is mandatory to fulfill to qualify for detailed evaluation. Failure to meet and submit all documents related to basic evaluation may lead to disqualification.

2. Detailed Evaluation

(Minimum Passing Score Required is 65 Points for qualifying to Financial Opening)

DETAILED EVALUATION CRITERIA FOR TENDER			
Specifications are available at Annex-A			
Sr. No	Item Name and Description	Marks	Max Marks
1	Past Performance/Experience of the Bidder (Reg. with GST/NTN) Attach copy of all supporting documents	--	10
1.1	1 – 3 year experience	2	--
1.2	4 – 8 year experience	4	--
1.3	9 – 15 years' experience	6	--
1.4	Above 15	10	--
2	Relevant Experience (Attach copy of all supporting documents)	--	10
2.1	1 – 5 years' experience	3	--
2.2	6 – 10 years' experience	6	--
2.3	11 and above year experience	10	--
3	Financial Position/ Status (Attach copy of all supporting documents)	--	10
3.1	Last sales tax paid Form	4	--
3.2	Bank Certificate (satisfactory) attach original bank certificate indicating financial status	2	--
3.3	Statement Worth (Min 2 m) attach all supporting documents	4	--
4	After Sale Services Available (Attach copy of all supporting documents)	--	10
5	Technical Evaluation of quoted items (Attach copy of all supporting documents)	--	60
5.1	Specification matched as provided in Annex-A	30	
5.2	Literature in printed shape attached	2.5	
5.3	Reliability	2.5	
5.4	Delivery schedule as per need	5	
5.5	List of clients / where this equipment delivered	5	
5.6	Satisfactory letter from clients in favour of such equipment	5	
5.7	Guarantee / Warranty (as the case may be)	5	
5.8	Provision of Training to concerned user	2.5	
5.9	Free Installation (if required) as per requirement	2.5	
Total		--	100