

**TECHNICAL & HIGHER EDUCATION INSTITUTIONS SOCIETY,
U.T. OF DAMAN & DIU
OFFICE OF THE PRINCIPAL
GOVT. POLYTECHNIC-DIU
FORT ROAD, DIU: 362520**

No. 5.1/THEIS/GP-DIU/TENDER/2018-19/239

Dated: 07/03/2019

E-TENDER (ONLINE TENDER)-ID-356455

Sealed tenders are hereby invited by the Principal. Govt. Polytechnic - Diu for supply of **Mechanical Engineering Equipment's**, as stated below as per the terms and condition stipulated attached herewith. Tender documents should be submitted along with nonrefundable tender fees of Rs. 500/- DD, favor of Daman & Diu Society for Technical Edu. & Higher Edu. (CENT) and refundable E.M.D Rs. 1,23,000/- of the total cost of supply items in favor of Daman & Diu Society for Technical Edu. & Higher Edu. (CENT). With the **VAT / GST Department of U.T. of Daman & Diu (Lowest bidder must obtain local VAT/GST Registration within 15 days)**

Last date of Submission of Tender : 27/03/2019 at 12:00 PM

Opening of Tender : 27/03/2019 at 03:00 PM (if Possible)

Sr. No.	Configuration/ Specification	Qty.	Rate	Total
1.	TWO STAGE RECIPROCATING AIR COMPRESSOR TEST RIG (2 H.P.) Air cooled intercooler pressure 6 Kg/Cm ² 2 H.P squirrel cage induction motor. An orifice type air intake measuring device with orifice plate & U - Tube Manometer, M.S. Air intake Reservoir of size 0.3m x 0.3m x 0.6m mounted on iron stand. 90 Ltr M.S constructed air storage tank (On-Site Service/Maintenance for 3 years)	1		
2.	Four Stroke Diesel Engine with Brake Drum Loading system (test rig) Full test rig setup. a. Engine: Single cylinder 4 stroke diesel engine (vertical) of 5 HP capacity, ISI Marked. b. Dynamometer: Rope Brake Dynamometer, on a common base plate. Brake drum of 400 mm dia with cooling arrangement, vertical spring balance, hand wheel, weight hanger, dead weights for conducting experiments. c. Fuel Measuring Device: Fuel tank mounted on iron stand, burette tube, three way cock, connecting tube & a stop clock. d. Calorimeter: Double Pipe Heat Exchanger to measure the heat loss through exhaust gases. e. Air Intake Measurement: Air Intake reservoir of size 0.3 x 0.3 x 0.5 m. with orifice plate, U-Tube manometer of 0.3 m height for the measurement of air flow rate. f. Cooling Arrangement: Cooling Water measurement by rotameter to determine the discharge of cooling water. Internal cooling water need for the engine & drum cooling. g. 12 channel Digital Temperature Indicator: With set of thermocouples. (On-Site Service/Maintenance for 3 years)	1		
3.	VCRS Test rig with capillary tube and thermostatic expansion valve 1. Compressor : Hermetically sealed compressor. 2. Condenser : Air Cooled condenser made out of	1		

	<p>copper pipe & Aluminum fins of matching capacity with fan cooling.</p> <p>3. Evaporator : Copper Coil immersed in water. (Insulated)</p> <p>4. Expansion device : Capillary Tube & Thermostatic expansion valve.</p> <p>5. Energy Meter : One each for power measurement of compressor & evaporator heater.</p> <p>6. Pressure Gauge : 2 Nos. for H.P., L.P. measurement</p> <p>7. Suitable filter/drier.</p> <p>8. Hand Shut Off type Service valve.</p> <p>9. Dimmerstat to control power supply to heater.</p> <p>10. Rotameter for Refrigerant flow measurement.</p> <p>11. Immersion type electric heater.</p> <p>12. Solenoid valve Castle Italy make.</p> <p>13. Set of thermocouples.</p> <p>CONTROL PANEL :</p> <p>1. 12 Channel Digital Temperature Indicator</p> <p>2. HP-LP Cutout : Make Ranco /Danfoss or Equivalent.</p> <p>3. Switches : For compressor, condenser fan, solenoid valve & evaporator heater.</p> <p>4. Voltmeter : 0 - 250 V.</p> <p>5. Ammeter : 0 - 15 A. (digital preferably)</p> <p>6. Thermostat : Ranco or equivalent (On-Site Service/Maintenance for 3 years)</p>			
4.	<p>Window AC and Split AC Test rig</p> <p>1. Compressor : Hermetically sealed compressor.</p> <p>2. Condenser : Air Cooled condenser made out of copper pipe & Aluminum fins of matching capacity with fan cooling.</p> <p>3. Evaporator : Air calorimeter type evaporator.</p> <p>4. Expansion device : Thermostatic expansion valve.</p> <p>5. Energy Meter : For power measurement of compressor.</p> <p>6. Pressure Gauge : 2 Nos. for H.P., L.P. measurement</p> <p>7. Suitable filter/drier.</p> <p>8. Hand Shut Off type Service valve.</p> <p>9. Rotameter for Refrigerant flow measurement.</p> <p>10. Duct : Air duct in which evaporator is fitted.</p> <p>11. Blower : Suitable capacity blower with air control arrangement.</p> <p>12. Set of thermocouples.</p> <p>CONTROL PANEL :</p> <p>1. 12 Channel Digital Temperature Indicator</p> <p>2. HP-LP Cutout : Make Ranco /Danfoss or Equivalent.</p> <p>3. Switches : For compressor, condenser fan & blower.</p> <p>4. Voltmeter : 0 - 250 V.</p> <p>5. Ammeter : 0 - 15 A (digital preferably) (On-Site Service/Maintenance for 3 years)</p>	1		
5.	<p>Refrigerants</p> <p>R-134a , R-22, R-410a</p>	1 kg each		
6.	<p>Desert Cooler test rig. (Air washer) test rig</p> <p>1. Duct : 500 x 500 x 800 mm Duct</p> <p>2. Air Fan with Motor : suction type air fan fitted on the top of the duct.</p>	1		

	<p>3. Set of thermocouples.</p> <p>CONTROL PANEL</p> <p>1. 12 Channel Digital Temperature Indicator</p> <p>2. Switches for Heaters, pumps & Air fan.</p> <p>(On-Site Service/Maintenance for 3 years)</p>			
7.	<p>Standard Refrigeration Tool Kit</p> <p>Tube Cutter, Flaring Tool, Swagging Tool, Brazing Torch, Copper Tube Bender, Adjustable Wrench, Flat Edge Screw Driver, Philip Screw Driver, Allen wrench, Long Nose Plier, Electrical Plier, Slip Joint Plier, Pipe Wrench, Socket Wrench Set, Nut Driver, Box Wrench- 1/4 of an inch to 1-1/4 inch size, Open Wrench -1/8 of an inch to 1-1/4 inch size, Flat File, Round File, Tape Measure, Guage Manifold.</p> <p>(1 Year Guarantee)</p>	1		
8.	<p>Anemometer</p> <p>Digital</p> <p>Vane Anemometer</p> <p>Portable</p> <p>Display 18mm (0.7") LCD (Liquid Crystal Display), 3 1/2 digits</p> <p>Operating Temp. 0 °C to 50 °C (32 °F to 122 °F)</p> <p>Dimension Instrument : 168 x 80 x 35mm (6.6 x 3.2 x 1.2 inch)</p> <p>Sensor Head : Round, 72 mm Dia.</p> <p>Operating Humidity Less than 80 % RH</p> <p>Air Velocity Sensor Structure Conventional twisted vane arms and low-friction ball-bearing design</p> <p>Air velocity Measurement Range Resolution Accuracy m/s 0.4-30.0 m/s 0.1 m/s ± (2%+0.2 m/s)</p> <p>(3 Years Warranty)</p>	1		
9.	<p>Temperature Humidity Meter</p> <p>Temperature Range(C) -20 to 60 °C</p> <p>Humidity Range 0 to 100% RH</p> <p>Display Large-screen LCD</p> <p>Resolution - 0.1 °C / °F</p> <p>(3 Years Warranty)</p>	1		
10.	<p>Cooling Tower Test Rig</p> <p>Blower Capacity: 1 HP</p> <p>Geyser Capacity: 3 KW</p> <p>Digital Temperature Indicator:</p> <p>No. of Digits: 4</p> <p>Digits Temperature Sensors: RTD PT-100 type</p> <p>Water flow measurement: Rotameter Range: 0 to 60 cc/sec</p> <p>Calibrated water tank: Material: MS with FRP coated Size: 250 x 250 mm</p> <p>(On-Site Service/Maintenance for 3 years)</p>	1		
11.	<p>Vertical Condenser Test Rig</p> <p>Heating Arrangement</p> <p>Rotameter for flow measurement of cold water. Range : 0 - 11 LPM</p> <p>Measuring Cylinder for condensate measurement</p> <p>Set of thermocouples</p> <p>12 Channel Digital Temperature Indicator</p> <p>(On-Site Service/Maintenance for 3 years)</p>	1		
12.	<p>IC Engine Parts Models</p> <p>(Fuel pump, different types of carburetors, different types of injectors- distributors)</p>			
13.	<p>Plate Type Heat Exchanger</p> <p>Technical Specifications:</p>	1		

	<p>System : Water to Water Plates : Material Stainless Steel Water Flow Measurement : By Rotameter (2Nos.) One each for cold hot fluid. Hot Water Tank : Made of Stainless steel, Double Wall, Insulated with ceramic wool. Hot Water Circulation : Magnetic Pump. Heaters : Nichrome wire heater. Rigid Structure Control Panel: Digital Temp. Controller : 0-199.9°C, (For Hot Water Tank) Digital Temp. Indicator : 0-199.9°C, with multi-channel switch Temperature Sensors : RTD PT-100 type.-4Nos. Standard make On/Off switch, Mains Indicator etc. (On-Site Service/Maintenance for 3 years)</p>			
14.	<p>Electronic refrigerant leak detector with microprocessor control for halogen gas Microprocessor control with advanced digital signal processing (DSP) Max. Sensitivity R12,R22,R134a are certified to <=16g/yr Ultimate Sensitivity <= 6 g/year for All halogen based refrigerants Operation Temperature 0°C-52°C(30-125°F) (On-Site Service/Maintenance for 3 years)</p>	1		
15.	<p>CNC Turning centre Machine Type Floor Standing Machine Machine Structure Fabricated Cast Iron Structure Machine Bed Flat Bed Center height: 180 - 220 mm Swing over axis: 75 mm Travel X axis: 125 mm Travel Z axis: 250 mm Chuck Self Centering: 3 Jaw Manual Chuck Spindle Nose Taper ISO 40 Spindle Bore: 30 mm Maximum machining Diameter: 80 mm Transmission Ball Screw Linear Guide ways Lubrication system Automatic Lubrication Pump Coolant Tank Capacity 40 Liters Machine weight 900 kg Machine Size 1500 x 800 x 900 mm Spindle Motor 2 H.P AC Induction Motor Spindle Speed 100 - 2800 rpm Spindle Drive Variable Frequency Drive Axis Motor Servo Motor Number of Axis 2Supply 220v,50hz,3 phase for machine Automatic Tool Turret 4 Station Automatic Tool Turret CNC Controller HUST CNC Controller H4P-T with Panasonic Servo System Type of Control System Industrial CNC Controller with provision to connect to PC Tool Path Simulation Provided Input System Metric/Inch Backlash compensation Provided Axis Feed Rate 0 - 3000 mm/min Axis Rapid rate 5000 - 10000 mm/min Resolution 0.001 mm Repeatability ± 0.002 mm</p>	1		

	<p>CNC Programming Standard ISO (G , M , F, T Codes)Program Dwell Provided Block Skip Function Provided Emergency Stop Provided Supervisor Lock Provided Password Protection Provided Graphical Simulation Online Simulation Provided Self Diagnostic Function Provided DNC communication Possible CAD/CAM Compatibility Possible Hand wheel operation MPG for manual operation (Optional)Co-ordinate system Absolute and incremental Axis feedback 100% Closed Loop Option skip function Available Optional stop and feed hold function Available Manual data input Available Online acceleration/Deceleration Available Mirror effect cutting Available Tool radius compensation Available Rectangular grooving Available Tool radius compensation Available Circular grooving Available Boring canned cycle Available Soft over travel limits Available Feed rate commands Either mm/min or mm/rev both possible Feedback resolution of axis motor 10000 pulses per revolution Feedback of spindle motor 4096 pulses per revolution Interpolation of Axis Two axis at any time On Screen Diagnostics Possible Output Control in Auto MDI mode Possible On Screen Line Simulation Possible Input feedback in Auto Mode Possible Feed Override 0-150%Spindle override 0-100%Turning Facing Tool with spare Insert Shank 20 mm Brazed Parting Tool Shank 20 mm Threading Tool with insert 20 mm Automatic Lubrication Pump Provided Coolant Pump + Coolant Oil (1 Ltr) Provided Manual explaining Training, Operations, Experiments and Machine's working Provided Raw Material for trial (Steel Rod mm) Provided (1 Nos)Vibration Damping Pads Provided (4 Nos)Tool Kit containing Allen Keys, Screw Driver, Spanner as required in machine Provided (1 Each)Isolation Transformer Provided4 Station Automatic Tool Turret Provided (On-Site Service/Maintenance for 5 years)</p>			
16.	Decimal stopwatch Non fly back type	2		
17.	Playing cards, Standard	2 set		
18.	M.S Pins, 10mm dia X 15mm length with tolerance of ± 0.01 mm.	100		
19.	Buttons of 6 different colors	100		
20.	Sampling rack with 1000 washers	1 set		
21.	Telescoping gauge set (6 pcs)	1		
22.	Height Gauge Material stainless steel Range 300mm Least count 0.01mm	1		

23.	Depth Measuring Gauge Range 0-100 mm least count 0.01mm.	1		
24.	BEVEL PROTECTOR Range: 360 Deg, Least count : 5Min,	1		
25.	Clinometers (Pendulum Inclinator) Least count : 0.2 degree Shockproof : 2000 gravity	1		
26.	Slip Gauge Box (112 pieces set) Material : metal or ceramic material hardened steel alloy	1		
27.	Optical Clinometer, housing or vessel with a transparent liquid changing the direction of at least one optical beam bundle depending on inclination	1		
28.	Sine bar Length 150mm, & 200mm.	1		
29.	Straight Edge, Width (mm)40 mm Length (mm)500 mm Material Hardened Stainless Steel Straightness in μm / mm 0.03 mm	1		
30.	Thread pitch gauge, Screw Pitch Gauge Range : 0.4-7mm + 4-42mm Specifications : Number Of Leaves: 21 + 30	1		
31.	Radius gauge, Type of Product :180° Arc Metric Radius Gauge Range of Radius (mm) :15.5-25 Radius of Leaves Included (mm) :Pairs: 30- Composition of leaves: 15.5 - 20mm by 0.5mm, 21 - 25mm by 1mm	1		
32.	Surface plate, 500 x 500 mm CI	1		
33.	Manual Hand Blower Material Cast Iron & Steel Operating Mode Manual Weight 4 kg	3		
34.	Anvil Weight 50 kg Material Iron Packaging Type Carton Application Workshop	6		
35.	Arc welding Machine with electrode holder Current (Ampere) 0-200 Technology Inverter Based Phase Two Phase Accessories per machine 3mtr Welding Cable, Welding Holder ,Welding Gloves , Welding Goggle , Safety White Helmet ,Lugs and 1 pkt. of 3.15mm Electrodes Key Required Features Long service life Easy to use Durability	1		
36.	Brazing torch Fuel Gas Type Oxy-Acetylene, LPG Material Brass Usage Welding	1		
37.	Cast Iron Wood Working Vice Jaw Opening (Inch) 10 Inch Base Type Swivel Material Cast Iron Jaw Width (Inch) 8 Inch OR 10 Inch Additional work Fitting on site	2		
38.	Chipping Hammer Weight 500 gm	50		

39.	Consumables (oil, gress, Tool) Lubrication Oil 50% and grease 50% of the total price Lubrication Grease Per Kg 250/- Colour White Lubrication Oil per Liter 130/-	1 BOX		
40.	Welding Torch Torch Type Welding torch Fuel Gas Type Oxy-Acetylene Materials Full Brass Nozzle 1/32" inch Oxygen 1.5 bar 20 psi Acetylene 0.1 bar 52 psi Cut (M.S.) 6 mm 1/4" inch	3		
41.	Tin Cutter Plier Non corrosive blades Convenient to hold Elevated durability	20		
42.	Welding Hand Gloves Size 14, 16 & 18 inch Material Leather Quantity 2 per Size	6 PAIRS		
43.	Heat Resistance Hand Gloves, Size Small, Medium, Large Features Heat Resistant Material Made out of Heavy Split Chrome Leather.	6 PAIRS		
44.	Welding Hand screen Material FRP (fiber) Usage Welding Thickness 3mm Type Safety Features Highly Durable Color any Material FRP (fiber) Hight , wide 15 inch , 7 inch	5		
45.	Hand Shearing Machine, Operation Mode Manual Cutting Material Stainless Steel Max Shear Width 0-500 mm Strokes per min 3.0 or 5.0	1		
46.	Safety Goggles Spectacles, frameless with 99. 9% uv protected scratch & impact resistant polycarbonate clear lens	20		
47.	Spot Welding Machine Arm Length 450 mm Rated Voltage 380V, 2 Phase, 50/60Hz Rated Capacity 100 kVA Duty Circle 20% (On-Site Service/Maintenance for 3 years)	1		
48.	Steel Wire Brush Brush Type Steel Wire Brush material Stainless steel Base material Wood Bristle texture Hard / Abrasive	20		
49.	Kinematic links and pairs board	1 each		
50.	Models (Friction Clutches- Centrifugal, Plate and cone clutch)	1 each		
51.	Models Gear trains (simple, compound, epicyclic, reverted)	1		
52.	STATIC & DYNAMIC BALANCING APPARATUS Technical Specifications: a) Drive Motor: FHP Motor, variable speed, with	1		

	<p>speed controller.</p> <p>b) Balancing weight: 4 Nos. of Stainless Steel with different sized eccentric mass for varying unbalance.</p> <p>c) Rotating Shaft: Material Stainless Steel</p> <p>d) The whole set-up is ingeniously designed and schematically arranged on a powder-coated rigid structure</p> <p>Control Panel:</p> <p>a) Standard make On/Off switch, Mains Indicator etc.</p> <p>b) Speed Control Unit.</p> <p>(On-Site Service/Maintenance for 3 years)</p>			
53.	<p>Hydraulic Press (C Frame)</p> <p>Capacity: 2.5-5 tons</p> <p>Semi-Automatic</p> <p>Material: Cast Iron Steel</p> <p>(On-Site Service/Maintenance for 3 years)</p>	1		

All the suppliers are directed to scanned the following documents:-

- VAT/GST Registration.
- Latest Solvency Certificate 40% of Estimate cost within one year from the last date of tender Uploading.
- PAN Card.
- Tender EMD in form of FDR (Jointly) valid for 6 months i.e. (180 days) from the last date of tender uploading.
- Tender Fee in form of Demand Draft (Non Refundable).
- Experience certificate.
- Registration Certificate
- Labour License Registration.

The documents prescribed in the NIT to be submitted alongwith bid.

For supply items Authorized Dealers, Vendors, Suppliers, etc. can also bid for Tender.

For Electrical works Electrical license is mandatory.

If the scanned copy of the above documents are not visible during opening of the tender the tender shall not be downloaded.

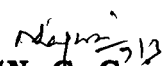
Quantities may vary according to the requirement.

TERMS & CONDITIONS

1. Eligibility:
 - i. The bidder should be registered under Sales Tax/VAT, GST.
 - ii. The bidder should have their support center at Diu or nearby.
2. The Earnest Money Deposit (EMD) of Rs. 1,23,000/- is payable in the form of FDR/Demand Draft issued by Scheduled Bank in favor of **Daman & Diu Society for Technical Edu. & Higher Edu. (CENT)** payable at Diu. Tender received without Earnest Money Deposit will be treated as invalid.
3. The rate(s) quoted should be strictly for free door delivery at Diu Districts respectively & will be valid and operative for supply order issued on or before.
4. The rates should be quoted inclusive of all taxes, installation & commissioning charges.
5. No extra charge for packaging, forwarding and insurance, transportation etc. will be paid in addition to the rates quoted.

Financial Bid Cover.

1. The rates should be quoted only for the items specified in the list of requirement and should be for the items of given special make / manufacture.
2. Rates quoted for items other than the required specification/ make/manufacture may not be considered.
3. The decision of the Principal, Govt. Polytechnic-Diu for acceptance/rejection of any articles supplied including the decision for equivalent specifications, standard and quality etc. of articles shall be final.
4. The Purchase Committee will open the Tenders online in presence of tenderer(s) or their representatives, if any presents in the Office of the Principal, Govt. Polytechnic-Diu on **27/03/2019 at 03:00 pm.**
5. The Principal, Govt. Polytechnic-Diu will be at liberty to accept the tender for the entire quantity or the part thereof at the rates submitted by the Bidder or at reduced rate during the negotiations if any.
6. Rates tendered/offered in response to the concerned Tender Notice by the successful bidder shall be considered as acceptance of all above terms and conditions for supply for all legal purpose.
7. (a) The Successful Tenderer will have to pay an amount equal to 05% of the total value of articles mentioned in the supply order within 10 days from the date of the order as Security Deposit in form of FDR/ Demand Draft in favor of **Daman & Diu Society for Technical Edu. & Higher Edu. (CENT)**. The successful bidder has to submit performance bank guarantee(here after referred to as Security Deposit) from any nationalized bank of **05% amount of his final offer towards performance security within 15 days from the date of issue of supply order for the duration of warranty period.**
(b) Non-receipt of Security Deposit within stipulated time limit will result in automatic cancellation of the order for supply without any intimation.
8. The Earnest Money(s)/Security Deposit(s) paid by the tenderer(s) earlier against any tender(s) or supply order(s) is/are not adjustable with Earnest Money or Security Deposit required as per conditions of this tender.
9. All bills should be in Triplicate and should invariably mention the number and date of supply order.
10. All bills for amount above Rs. 5,000/- should be pre-receipted on a Revenue Stamp of proper value. Bills for amount exceeding Rs. 5,000/- not pre-receipted on Revenue Stamp of proper value will not be accepted for payment.
11. Each bill in which Value Added Tax is charged must contain the following certificate on the body of the bill.
"CERTIFIED that the goods on which Value Added Tax has been charged have not been exempted under the Central Sale Tax Act or the Rules made there under and the amount charged on account of Value Added Tax on these goods is not more than what is payable under the provisions of relevant Act or Rules made there under".
12. In respect of any dispute given rise to the legal proceedings between the parties, the courts at Daman and Diu & DNH shall alone have the jurisdiction.
13. The tender can be submitted up-to **12:00 pm 27/03/2019** and shall be opened on same day at 03:00 hrs if possible in the office of the Principal, Govt. Polytechnic-Diu or in the office of the Hon'ble Collector, Diu in the presence of the Purchase committee and Tenderer(s) or their representative(s) if present.
14. Items should be covered by 'onsite warranty' for a period of One year (or mentioned in specification) from the date of installation and bidder must have service/support location at local level i.e. Diu or nearby.
15. The designated committee will check quality of the **Mechanical Engineering Equipment's** supplied before installation at Principal, Govt. Polytechnic-Diu.


(N. G. Gajwani)
Principal
Govt. Polytechnic-
Diu.