



KERALA AGRICULTURAL UNIVERSITY
RICE RESEARCH STATION, MONCOMPU, THEKKEKARA P.O.,
ALAPPUZHA 688 503

No.B/29/2017

Dated 20.02.2017.

TENDER NOTICE

Sealed tenders are invited for the supply, installation, testing & commissioning of the following items at RRS, Moncompu as per the specifications and terms & conditions detailed below.

Sl No.	Item	Required Quantity (No.)
1.	<u>100 KVA Diesel Generator with AMF Panel,</u> <u>A/C unit & Dehumidifier</u> (Detailed specification attached)	1

Cost of Tender Forms

Particulars	Original (Rs.)	Duplicate (Rs.)
Supplies costing above Rs.50,000/- and upto Rs.10 lakhs.	0.2% of the quoted amount rounded to the nearest multiple of 100, subject to a minimum of Rs.400 and maximum of Rs.1500+VAT as applicable	50% of the cost of the original upper rounded to the nearest multiple of Rs.100+VAT as applicable
Supplies costing more than Rs. 10 lakhs	0.15% of the cost of the items rounded to the nearest multiple of 100, subject to a maximum of Rs.25,000+VAT as applicable	50% of the cost of the original, upper rounded to the nearest multiple of Rs.100+VAT as applicable

(Tender cost and VAT amount should be specified while submitting tender.)

Last Date of Receipt of Tender : 27.02.2017 3:00 pm

Date and Time of opening of Tender : 27.02.2017 3:30 pm

PROFESSOR & HEAD

100 KVA Diesel Generator with AMF Panel, A/C unit and Dehumidifier

I. Specifications:

I) Supply, installation testing and commissioning of silent type Diesel Generating set of 100 KVA 415 Volts 50 Hz, 3phase 0.8 lagging power factor at 1500 RPM and consisting the followings.

(I) ENGINE

Standard Brand make Diesel Oil Engine(**Mahindra/Kirlosekar Ashok Leyland/Cummins**) Direct injection type, 4 stroke vertical in line cylinders, liquid cooled with specified shaft output after reduction of power for engine Auxiliaries and When operating at a governed speed of 1500 RPM at NTP condition. The engine is suitable for continuous duty and conforms to IS 10000 (except for HA 694 and turbo charged engines which confirm to BS 5514). The engine is complete with all standard accessories and fittings as detailed below.

1. Flywheel and flywheel housing
2. 12 V DC electric start arrangement
3. Exhaust Silencer – Residential Type Silencer
4. Fuel Filter (Pre and Micro)
5. Lube oil filter “Spin-on” type
6. Radiator (For liquid cooled DG set only)
7. Dry Type Air Cleaner
8. Battery charging Alternator
9. Fuel hoses
10. Maintenance manual and spare parts catalogue
11. Radiator fan (For liquid cooled DG set only)
12. Fuel injection pump with electronic governor and fuel feed pump
13. Engine safety protection for High Liquid Temperature and Low Lube Oil Pressure
14. Closed Coupled Engine with inbuilt Anti Vibration Mounting Pads
15. First Fill of Lube Oil
16. First Fill of Coolant (Life is 3000 running hours or 2 years)
17. Genset Controller consists of Engine parameters like R.P.M., Liquid Temperature, Oil Pressure, Fuel level indication, Engine Hours run & Alternator parameters like Voltage, Frequency, Amps, KW, KVAR, PF etc.
18. Genset Controller also have protection for High Liquid Temperature, Low Lube Oil Pressure, Under speed & Over speed

(II) ALTERNATOR

self – excited, self – regulated, screen protected, drip proof alternator with static excitation system, capable of developing rated output at 415V, 0.8 p.f. 50 Hz when running at 1500 RPM at NTP conditions and conforms to the IS 4722 standards.

(III) CONTROL PANEL:

Floor mounting fabricated sheet steel construction, suitable for single running manual operations and rated for system output. The panel is made of 1.6mm sheets and with one/two hinged front doors of 2 mm sheet steel bolted back / sides, totally enclosed and vermin proof.

BILL OF MATERIAL FOR CONTROL PANEL

- 1) 1 No. Genset Controller having Alternator parameters like Voltage, Frequency, Amps, KW, KVAR, PF etc.
- 2) 3 Nos. Current Transformers
- 3) 1 No. KWH meter – 3 phase, 4 wire unbalanced
- 4) 1 set Aluminibusbars of suitable capacity
- 5) 2 Nos. Indicating lamps – “ set running” and “set on load”
- 6) 1 No. MCCB
- 7) 3 Nos. Instrument Fuses.
- 8) 2 Nos. Earthing studs
- 9) 1 No. Earth Fault Relay

NOTE: Any other device/instrument not mentioned above shall be charged extra.

IV) AMF Panel

Control panel suitable for 415V, 3 Phase, wire, 50Hz .8PF, fabricated out of 16 SWG, CRCA MS sheets, free standing, floor mounting indoor type, front hinged, Innor use, cubicle type, undrilled and removable bottom gland plates for incoming and outgoing connections, dust and vermin proof with Powder Coated Paint, complete with internal wiring ferrules, name plates etc, generally consists of followings.

Approximate cubicle size – 1600H x 750L x 300D

- 1) 1 No. 150A, 3P MCCB back up for EB
- 2) 1No. 150A, 3P MCCB back up for DG
- 3) 1 No. 160A, 4P Power contactor for EB with Mechanical interlock
- 4) 1 No. 160A, 4P Power contactor for EB with Mechanical interlock
- 5) 1 No. Line Voltage Monitor
- 6) 1 No. Digital VAF meter
- 7) 3 Nos. CurrentTransformer
- 8) 1 No. Combined DC Voltmeter & Ammeter
- 9) 1 No. Battery charger selector switch
- 10) 1 No. Auto manual selector switch
- 11) 1 No. DC control selector switch
- 12) 10 Nos. Control MCB 1P 6A
- 13) 4 Nos. 12 V DC &220V AC LED indicating lamps
- 14) 6 Nos. Push button with contact elements
- 15) 2 Nos. Electronic on delay timers
- 16) 2 Nos. 230V AC Aux. contactor
- 17) 1 No.12V DC Aux.Contactor
- 18) 1 No. μ p based battery charger
- 19) 1 No. Siren
- 20) 1 No. 2C/O Plug-in type relay
- 21) 1 No.3C/O Plug-in type relay
- 22) Lot Control TB
- 23) Lot Aluminium Busbar.

(V) ACOUSTIC ENCLOSURE
NOISE LEVEL

75 DB at 1 metre from the enclosure surface under free field conditions as per CPCB norms.

CONSTRUCTION

Acoustic Enclosure shall be powder coated and fabricated out of 16 SWG CRCA MS sheet. The silent canopy shall be of nut bolt type construction. Powder coating is done after seven-tank surface preparation process of sheet metal. Canopy panel and doors shall have inside lining of **FIRE-RETARDANT** foam as acoustic material. Four hinged doors shall be provided to canopy, one door shall have glass window for control panel.

(VI) BASE FRAME

Base frame is fabricated in sheet metal. The base frame is rugged in construction and designed for mounting engine and alternator close coupled, with cross members mounted on AVM. The base frame shall have provision for mounting of acoustic enclosure. The base frame is having provision of lifting hook for convenient lifting of complete set, i.e., along with canopy, engine and alternator.

(VII) FUEL TANK

Removable fuel tank with 8 hours full load running capacity fabricated out of CRCA MS sheet and is part of base frame. It is duly painted and fitted with inlet and outlet connections. Fuel tank can be easily removed for cleaning or any maintenance.

(VIII) ACCESSORIES:

- 1) 1 No. Dry 12V Battery
- 2). 1 set Battery leads

(IX) INFORMATION :

- 1) The engine should be directly coupled to the alternator through the holset type coupling or close coupling in order to form a very compact arrangement and both units will be mounted on a rigid fabricated base plate.

Gross weight **2200Kgs.**

Size of Diesel Captive Generation Unit with Canopy 1 set

L x B x H – **3240 x 1340 x 1795** (Approx)

- 2) Supplying and fixing exhaust gas piping of 100 mm dia. Welded black M S pipe 'B' class conforming to IS:3589 cut to required length for the DG set and installed with necessary bends, supports clamps, antivibration mounting, of exhaust systems etc.as required- 6M
- 3) Supplying and laying control wiring with 10core 1.5 sq mm PVC insulated,PVC sheathed copper conductor cable in PVC pipe from the alternator to AMF Panel including termination connections,testing etc.as required. – 6 mts
- 4) Providing necessary cement concrete foundation with reinforcement 1:2:4 (1cement: 2coarse sand: 4 stone aggregate of nominal size 20mm) for the DG set i/c excavation sand filling, providing base concrete plastering and levelling of top surface etc.as required -5m cub

5) Earthing with C I earth plate 600 mm X 600 mm X 6 mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering Pipe of 2.7 metre long etc .with charcoal/ coke and salt as required(3sets).

6) Providing and fixing 25 mmX3mm copper strip on surface or in recess for connections etc.as required -52mts

7) Supplying and laying of following sizes of PVC sheathed XLPE aluminium power cable of 1.1 KV grade conforming to is 7098 (part-1) 1988.

A)3.5 core 120 sq mm 55M

B) 3.5core 35 sq mm 60M

8) Fabricating supply and fixing of rain hood for 100 KVA D G set with 100mm dia GI Pipe vertical run and horizontal including purling with G I tube 50 X65 mm and 25 X25 mm with tufline G I sheet for roof, painting etc. as required - 1 Job

9) Documentation; Preparation of Electrical Drawing submission of Drawings to Electrical Inspectorate and obtaining approval arranging Inspection for entire Installation and other utilities obtaining sanction order for the energisation of the installation complete, except the fees payable to the statutory authority in the name of client - 1 Job

10. Supplying and fixing anguline support for exhaust pipe including painting as required - 50kg

II A/C unit (1.5 ton capacity)

- a) Supplying installation, testing and commissioning of 1.5 TR (with minimum 18000 BTU/Hr Cooling capacity) split type air conditioning unit standard fitted with Sealed compressor operating on 410/407 refrigerants gas and having copper condenser Coil, wall mounting evaporation unit etc. with guaranteed cooling capacity confirming to IS, suitable for operation on 240V,50HZ single phase ac supply and capable of performing. a) cooling b) air circulating c) filtering etc.i/c providing upto 3m copper refrigerant pipings and wiring between indoors and out door units PVC drain pipe etc as required make: carrier/ 1set (Panasonic/Blue star/Voltas make) - 1 Job
- b) Supplying Installation, Testing and commissioning of 5KVA voltage stabilizer (wall mounted type) with time delay high and low voltage cut off etc. as required - 1no

III) Dehumidifier (28 litre capacity)

Supplying and fixing dehumidifier. Dehumidifier capacity -28 ltr, Noise level 42, Refrigerant gas/charge R-34a Air filter, Carbon filter, Photo catalytic filter, HEPA Filter including testing etc are required - 1 Job.

Terms and conditions

1. Tender should be submitted in the prescribed forms which can be downloaded from the website : www.kau.edu/tenders
2. Sealed cover containing the tender should be superscribed “**Tender for the supply and installation of 100 KVA Diesel Generator with A/C unit & Dehumidifier**” and should be addressed to **The Professor and Head, Rice Research Station, Moncompu, Thekkekkara P.O, Alappuzha District, PIN : 688 503.**
3. Each tender should be accompanied by **Tender fee and Earnest Money Deposit (EMD) of 1%** of the total rupee equivalent cost of the quoted items (subject to minimum of Rs.200/-) by way of **two crossed Demand Drafts separately** for tender fee and EMD drawn in favour of **The Professor and Head, Rice Research Station, Moncompu, Thekkekkara P.O, Alappuzha District, Pin : 688 503** payable at State Bank of Travancore, Thekkekkara Branch (code : 71084). Late and incomplete tenders and tender without EMD and agreement will not be accepted.
4. The tender should be accompanied by an agreement in Kerala stamp Paper worth Rs.200/- (Rupees Two hundred only) and format can be downloaded from the above website. Withdrawal of tender should after its acceptance or failure to supply the equipment or not according to the specifications will entail cancellation of the tender.
5. The successful tender should execute an agreement in Kerala Stamp Paper worth Rs.200/- (Rupees Two hundred only) and furnish a **Security deposit of 5%** of the cost of the equipment quoted in the form of term deposit/bank guarantee/demand draft drawn in favour of **The Professor and Head, Rice Research Station, Moncompu, Thekkekkara.P.O, Alappuzha District, Pin : 688 503** payable at the State Bank of Travancore, Thekkekkara Branch(Code:71084), when directed from this office. The format for the agreement can be downloaded from the above website. Firms who are exempted from the payment of EMD should furnish copy of the currently valid certificates from store purchase departments, Govt. of Kerala.
6. The cost of the item, tax and other charges should be separately stated.
7. The exact specifications, details of make, model, name of manufacturer, warranty details etc. of the items must be clearly specified. Copies of detailed technical literature and illustrated brochures of the units quoted are to be included along with the offer. Details of maintenance service contract offered after expiry of normal warranty, spare-parts availability and after-sale-service facilities available should be indicated. Offers without these are liable to be rejected.
8. In the case of electrically operated equipments the circuit diagram will have to be supplied.
9. The decision of the undersigned in finalizing the tenders will be final and binding.
10. Prices quoted should be valid up to 31.03.2017 or beyond.
11. If any Bandh/Harthal/Strike/any unexpected holidays occurs on the date of opening of tender, the tender will be opened at the same time on the next working day.
12. On acceptance, the supply order will placed and invoice should be addressed to **The Professor and Head, Rice Research Station, Moncompu, Thekkekkara P O, Alappuzha District, PIN :**

688 503. The payment will be effected only after the satisfactory supply, installation of the item at RRS Moncompu in working condition and necessary demonstration by authorized service personnel.

13. The successful tenderer should supply the items to The Professor and Head, Rice Research Station, Moncompu, Thekkekkara P.O, Alappuzha District, PIN : 688 503 within one month from the date of receipt of the supply order. The Professor and Head, Rice Research Station, Moncompu, Thekkekkara P.O, Alappuzha reserves the right to remove the defaulted name from the list of suppliers permanently or for a specific period.
14. Tenders insisting payment in advance either full or part releasing the documents through bank are liable for rejection.
15. List of users giving the exact address of the contact persons and the model number of the units available at these locations have to be provided. Evidence of exclusive/authorized distributorship from foreign principals should be provided along with the offers for overseas product.
16. The Professor and Head, Rice Research Station, Moncompu, Thekkekkara P. O, Alappuzha has the right to accept or reject any or all of the offers without assigning any reason.
17. All the rules and regulations applicable to Government tenders will be applicable to this tender
also

Professor & Head