

**A. The scope of Works for Supply, Installation, Testing & Commissioning of 650KVA (Prime)**  
**Generator system complete with all accessories:**

**TECHNICAL OFFER**

**GENERATOR DETAILS:**

Tempest (Manufactured by Allam Marine Limited, UK) Diesel Generating Set Model: PM650 (650KVA Prime & 710KVA Standby) at 1500 rpm, 50 Hz, 3 phase, 4 wire, 400/230 volts at 0.8 power factor. All other details are as follows:

BRAND	: Tempest
MODEL	: PM650
COUNTRY OF ORIGIN	: UK
PORT OF SHIPMENT	: Any port, UK
CAPACITY (Prime)	: 650 KVA
CAPACITY (stand by)	: 710 KVA
START SYSTEM	: Automatic Microcontroller based as well manual Start / Stop System
EMERGENCY STOP	: Emergency Stop available as protec on device
VIBRATION SKID	: Built-in vibra on skid for smooth opera on
BATTERY CHARGER	: Auto Ba ery Charger (ABC) included
DIMENSION (Open Set) (cm)	: 340X154X227 (LxWxH)
FUEL TANK CAPACITY	: 1539 (Open) & 1080 (Canopied) Liter
FUEL CONSUMPTION	: 97.00 Ltr./Hr. at 75% Load

**ENGINE DETAILS:**

BRAND/ORIGIN	: Perkins, UK / USA MODEL : 2806A-E18TAG2
SPEED	: 1500 RPM INDUCTION SYSTEM : Turbocharged
ENGINE TYPE	: 4 stroke mul cylinder industrial diesel Engine suitable for tropical environment
COOLING SYSTEM	: Water cooled (Radiator cooled with engine driven fan)
PROTECTION	: Over speed, under speed, oil pressure, Over heating etc
FUEL TANK	: Built in with base

All other details are as per a ached Engine catalogues.



## ALTERNATOR DETAILS :

Industrial brushless AC Alternator model all other details are as follows:

BRAND/ORIGIN	: Mecc Alte, UK
Model / Frequency	: ECO40-2L , 50 Hz
PHASE	: 3 Phase
Output (Volts)	: 400/415 volts (Line to line)
COOLING	: Air cooling
Insulation Type	: Class " H "
PROTECTION	: Industrial brushless design screen protected, fan ventilated, drip-proof, self exciting in accordance with IP21/IP23
VOLTAGE REGULATOR	: Automatic Voltage Regulator (AVR)
VOLTAGE REGULATION	: $\pm 1\%$ / $\pm 1.5\%$ power factor between 0.8 lagging & unity (Depends on Connected Load)

Alternator model may vary with the attached catalogues for manufacturing innovation.

## CONTROL MODULE:

Deep Sea Electronics (DSE), UK control system is incorporated with automatic set to manually & automatically start & stop the generator indicating the operation status and fault conditions via a graphical LCD display and a flashing LED on the front panel. All other details are as follows:

CONTROL MODULE TYPE	: Auto start (AMF) digital control module
OPERATION on	: Operation of the module is via push buttons mounted on the front panel with STOP, AUTO and MANUAL positions etc
DIGITAL INSTRUMENTS meter,	: Ammeter, Voltmeter, Frequency meter, run hour Oil Pressure, Water Temperature etc.
ALARM INDICATOR Temperature,	: Under/Over Volts, Under/over speed, Under/Over Frequency, Low Oil Pressure, High Engine Fail to Start and Loss of speed sensing etc.
LOAD TRANSFER TIME transfer 1	: Adjustable, Delay on start 1 to 25 sec, Delay on to 70 sec
ENGINE COOLING TIME	: 5 minutes maximum
PHASE FAILURE RELAY	: Digital on & control for Main's upper lower cut off voltage sensing and adjustable hysteresis voltage, sensing option etc

All other details are as per attached Allam's/DSE Catalogue.



## **STANDARD ITEMS:**

The following items will be supplied with the gen-set as standard:

- i. Lead Acid Battery 12/ 24 Volts as required
- ii. Silencer
- iii. Rubber anti vibration mountings
- iv. Flexible Bellows
- v. Battery charger
- vi. Main Line 3 pole Circuit Breaker
- vii. Alternator mounted deep sea UK original main controlling panel
- viii. Fuel tank for 10 hours opera on
- ix. Operational manual & keys etc.

Please note that toolbox is beyond this scope of supply.

## **WORK TEST CERTIFICATE**

Supplier will provide the test certificate mentioning generator serial number issuing from UK.

## **WARRANTY/GUARANTEE:**

As per standard of manufacturer, we provide 3000 hours or 2 year warranty whichever comes first, effective from the date of delivery at the client's premises. Our warranty policy is for any manufacturing defects or any premature wear & tear due to usage. The faulty part(s) is/are replaced/repared within the warranty period. However, Warranty doesn't cover improper maintenance by the user, consumable items, servicing by unauthorized person, running the genset above its capacity or any unauthorized modification of the genset.

## **INSTALLATION & COMMISSIONING:**

The price quoted here includes Carrying, Loading, Unloading, Installation & Commissioning charge provided the genset is installed in Basement or at Ground Floor level within Dhaka City. However, this offer does not include the cost of commissioning materials, such as, Power/Control Cable, Lube Oil, Coolant, Diesel, Civil works, Ducting, Manual labor, Silencer pipe Extension Work, & any other materials that may be necessary for installation of the generator set.

Installation : Genset installation on the pre made foundation will be done by the supplier.



**Cross World Group Service Engineers will supervise all the above mentioned works. Please call Manager, Commissioning Dept. Mob. 01755 514793 for your Installation Materials list or Commissioning, or for any Emergency Service please call Manager, Service Spare Sales Dept. Mob. 01755-514820.**

**After Sales Service** : Supplier will provide necessary after sales service within 12 hours after inform through email or phone call.

**SPARE PARTS, A ER SALES SERVICE & AMC:**

We maintain sufficient stock of spare parts to meet regular demands of our valued clients. After completion of warranty period, we extend our support for servicing of the generating sets at a reasonable charge by entering into a service agreement with the customers. Our service engineers are always kept ready 24x7 to a end emergency services to ensure uninterrupted power of the gen-sets. On-call service is also available to a end any types of emergencies.

**TRAINING:**

We will provide training to your operator of the Generating set after completion of commissioning. Operation and Maintenance Training-After successful installation and test run, supplier will arrange a effective operation and maintenance training session with RREL selected personnel

**PAYMENT TERMS** : 50% as with work order and 50% after delivery & Successfully complete the installation and run the product with all the load like Lift, A/C, other's Power line.

**PACKING** : Export friendly 'Shrink Wrap' packing.

**DELIVERY** : Within 01 to 03 days from the date of your valued work order, subject to availability of stock.

**VALIDITY** : This offer is valid for 30 days from the date of this offer.

**COMPLETION OF THE WORK** : Installation Commissioning and testing of the genset would be completed within 3(three) working days from the date of delivery, provided the site and commissioning materials made ready by the client.

**INSTALLATION AND COMMISSIONING CHARGE** : Free of Cost Without Materials.



We hope the above offer is acceptable to you and we look forward to your valued work order in our favour. Should you require further information or discussion, please feel free to contact the undersigned.

#### **B. Schedule of Rates:**

- i. All the rate of **Supply, Installation, Testing & Commissioning of 650KVA (Prime) Generator system complete with all accessories** should be following the RREL Rate Schedule Book which is approved by RREL Management.
- ii. Other's related work should be discussed with the RREL Management & negotiation then final that rate of the settled by both parties as per prevailing market price.

#### **C. Payment Condition:**

- i. 1st Payment : Advance payment 50% to be paid with the work order.
- ii. 2nd Payment: 50% after received all the materials at site. Successfully complete the installation and run the product with all the load like Lift, A/C, other's Power line.
- iii. Vat, Tax, ATI including.

#### **MODE OF PAYMENT**

Total Price	<b>Tk. 63, 50, 000/-</b> (Sixty Three Lacs Fifty Thousand Taka Only)
Generator & Local Canopy Price	<b>Tk. 58, 25, 688/-</b> (Fifty Eight Lacs Twenty Five Thousand Six Hundred Eighty Eight Taka Only)
VAT & Tax-5%	<b>Tk. 2, 91, 284/-</b> (Two Lacs Ninety One Thousand Two Hundred Eighty Four Taka Only)
AIT-4%	<b>Tk. 2, 33, 028/-</b> (Two Lacs Thirty Three Thousand Twenty Eight Taka Only)

#### **D. Terms & Conditions:** This terms & conditions shall be construed as an integral part of this work order.

- 1) If the contractor fails to obtain the progress of work at a satisfactory level or his overall performance is unsatisfactory, or failure to any of the terms & conditions mentioned here, the work order may be canceled with short notice. For such cancellation of the work order, no claim by the contractor will be allowed.
- 2) The prices are fixed for the item of work and there shall be no escalation in the rate on account of increase in the prices of labor or other incidental charges.
- 3) The contractor will have to engage sufficient skilled, obedient worker at the site, necessary Forman at a section of work must be engaged as and when required.
- 4) The contractor should strictly follow the Work Schedule. He should complete the job timely as per work schedule and/or as per instruction of Engineer of the company.
- 5) RREL will provide all temporary utility connection like Electricity & WASA. But do not provide any type of Gas Connection; during the period of work, contractor should be borne by own cost.



- 6) If any labor seems unfit in case of misbehavior with RREL staff, then he should be turned out from the site within 24 hours notice as directed by the company or their authorized representative. Any below standard workers will be expelled from the site.
- 7) Child Labor is not allowed. If any labor is found below 18 years 1% penalty will be imposed on total work order value.
- 8) The rate of nonscheduled items (if found during construction) will be settled mutually as per prevailing market rate and the bill shall be submitted separately.
- 9) The labor contractor should take all necessary precautions while working outside or inside of the building or any others risky job.
- 10) RREL shall supply all the safety security system, such as helmet, safety shoes, safety goggles, hand gloves welding helmet, safety belt, fire extinguisher and so on. Contractor must be ensuring that all of his workforce/labor is using these safety measures during construction.
- 11) RREL will not be liable for any sort of accidental fatal/occurrence. Also RREL will not pay any compensation for such kind of incident/accident. If any fatal accident occurs, then the labor contractor will be liable for all sorts of expenses for that accident.
- 12) No worker of Supplier should engage himself with any sort of unlawful activity. If anybody is found to do so, then the sub-contractor will be liable for that.
- 13) The Supplier will clean site and keep the debris/rubbish / generated from his work to a safe distance in a suitable location on the ground floor as per instruction of Engineer of the company.
- 14) Supplier shall rectify any faulty or defective work done by the labor contractor at his own cost.
- 15) Rate may be reduced by the management of the company for POOR WORKMANSHIP/
- 16) Works allotted in this work order may be partially or fully curtailed in case of poor standard workmanship or slow progress in work.
- 17) Supplier must complete the whole work within stipulated time frame.
- 18) Maintenance/Guarantee period of 02 (One) Year from the date of the handed over the 650KVA (Prime) System work. In this regard, a completion certificate is required from the respective Engineer-in-Charge.
- 19) The rates are valid till completion of the work. No intermediate enhancement of Rate will be allowed.
- 20) After sales service-Our Trained & Skilled Engineers, technicians will be available within 24hrs. notice for any problem related with our supplied equipments. All spare parts are ready stock from our store located at Factory.

**Agreed By**

**Signature of Contractor**