



Meghna Electronics Ltd.

Your Total Power Solution

Ref: ME/LTD/WO/CRO/011/2018

Date: 19/05/2018

To,
Managing Director
Cross World Ltd.
Plot 1/B, Road no. 90,
Gulshan-2, Dhaka-1212.

Sub: **Work order for supply, Installation & commissioning of 30KVA(Prime) & 33 VA (Stand by) Diesel Generator.**

Dear Sir,

We are pleased to place of work order for supply, Installation & commissioning of 30 kva(Prime) & 33 kva (Stand by) diesel generator which specification is below as per your quotation.

Generator Details:

As per Quotation, Tempest (Manufactured by Allam Marine Limited, UK) Diesel Generator Set Model: PS30 (30KVA Prime & 33 KVA 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 : PS30
COUNTRY OF ORIGIN : UK	PORT OF SHIPMENT : Any port, UK
CAPACITY (Prime) : 30 KVA	CAPACITY (stand by) : 33 KVA
START SYSTEM : Automatic Microcontroller based as well manual Start / Stop System	
EMERGENCY STOP : Emergency Stop available as protection device	
VIBRATION SKID : Built-in vibration skid for smooth operation	
BATTERY CHARGER : Auto Battery Charger (ABC) included	
DIMENSION (Open Set) (cm) : 155X75X131 (LxWxH)	FUEL TANK CAPACITY : 90 Liter
FUEL CONSUMPTION : 5.00 Ltr./Hr. at 75% Load	

Engine Details:

BRAND/ORIGIN : Perkins, UK	MODEL : 1103A-33G
SPEED : 1500 RPM	INDUCTION SYSTEM : Natural
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 ached Engine catalogues.



Alternator Details :

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

BRAND/ORIGIN : Stamford, UK	Model / Frequency : P144G / SOL2P , 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: 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	: Operation of the module is via push buttons mounted on the front panel with STOP, AUTO and MANUAL positions etc.
DIGITAL INSTRUMENT	: Ammeter, Voltmeter, Frequency meter, run hour meter, Oil Pressure, Water Temperature etc.
ALARM INDICATOR	: Under/Over Volts, Under/over speed, Under/Over Frequency, Low Oil Pressure, High Engine Temperature, Fail to Start and Loss of speed sensing etc.
LOAD TRANSFER TIME	: Adjustable, Delay on start 1 to 25 sec, Delay on transfer 1 to 70 sec.
ENGINE COOLING TIME	: 5 minutes maximum
PHASE FAILURE RELAY	: Digital option & control for Main's upper lower cut off voltage setting and adjustable hysteresis voltage, sensing option etc.

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

Automatic Transfer Switch (ATS):

Local built ATS will be supplied in a suitable steel enclosure wall mounted, fuses, magnetic contactor coil, indicators etc.

Interlocking : Electrical as well as mechanical
Magnetic Contactor / Motorized switch : 3 Pole
Brand of Breaker : ABB or Equivalent Europe origin
Paint : Powder coated

**Acoustic Canopy:**

Local built Acoustic Enclosure will reduce the sound level to 75 dBA @ 3 meter in open space and is complete with:

- Air inlet and outlet options at the alternator and radiator ends respectively.
- Hinged access doors on either side with proper locking option.
- Silencer.
- Cable entry gland apertures.

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 operation
- (ix) Operational manual & keys etc.

Please note that toolbox is beyond this scope of supply.

Warranty/Guarantee:

As per standard of manufacturer, 3000 hours or 2 year warranty whichever comes first, effective from the date of commissioning at the client's premises.

Delivery: Generator set will be delivery within 15 (Fifteen) days from the date of work order to our project site.

Other terms & condition: As per Quotation.

Total price of 30 KVA (Prime) Generator Set.: Tk. 8,50,000.00 (Eight Lac Fifty Thousand Taka) only.

Payment Mode:

1. Tk. 1,00,000.00 (One Lac) only as advance along with work order through Account payee cheque Dutch Bangla Bank Ltd no.5652508, dt. 28-05-2018.
2. Total 80% amount of total value will be paid before Generator delivery.
3. Rest of Tk. 20% amount will be paid after 2(Two) months of commissioning through Account payee cheque.

Thanks & best regards.


Md. Jahangir Alam
Managing Director,
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Tel: 88-02-44806242