

Diesel Generator Set Specifications Sheet- 45 kVA

| Generator Specifications: | |
|---|---------------|
| Genset Manufacturer | Greaves Power |
| Genset Rating | Prime Power |
| Genset Output (KVA / KW) | 45 / 45 |
| Genset Model | GPWII-P11-45 |
| Engine rating or Max. Power at rated RPM, in KW (BHP) | 59 (80.1) |
| Engine Model | 3GIITAG25 |
| Engine Type | TCAC |
| No. of Cylinders / Cylinder arrangement | 3 / Inline |
| Displacement (L) | 3.66 |
| Bore & Stroke (mm) | 108 X 133 |
| Compression ratio | 16.8 |
| Rated RPM | 1500 |
| Governor: Type /Class of Governing | G2/Mechanical |
| Over speed trip (rpm) | 1650 |
| Air cleaner type / Qty | Dry / 01 |
| Exhaust system | |
| Maximum allowable back pressure, kPa | 4.5 |

| Engine Electrical system: | |
|--|--------------|
| Charging alternator Voltage / Current (DC) | 12V / 35Amps |
| Starter Motor rated voltage (DC) | 12 |
| Battery Voltage (DC) / Capacity (AH) | 12V,88 AH |

| Fuel System: | |
|---|-----|
| Recommended Fuel | HSD |
| Fuel tank capacity (Ltr) | 100 |
| Fuel consumption - LPH at % load | |
| 100% | 12 |
| 75% | 9.2 |
| 50% | 6.3 |
| 25% | 3.8 |

| Lubricating Oil system : | |
|---------------------------------|--------------------------------------|
| Lube oil sump capacity | 8.5 |
| Oil change period (Hrs) | 500 |
| Oil consumption (% of sfc) | ≤ 0.2 |
| Oil filter quantity (Nos) /type | 01 / spin on type |
| Recommended Oil Grade | 15W40 Greaves Maxtherm API CI4 |
| Oil Cooler | Water cooled |

| Cooling System : | |
|---|-------------------------|
| Cooling system is designed for max ambient temp, Deg. C at rated load | 50 |
| Radiator System capacity, including engine, (L) | 15 Ltr |
| Water pump type | Centrifugal Gear Driven |

| Alternator Specification: | |
|---|---|
| Voltage | 380-440V |
| Frequency | 50Hz |
| Current @ 0.8PF (Amps) | 62.6 |
| Type | 4 Pole , Rotating field |
| Exciter Type | Brushless (Permanent magnet optional) |
| Leads: Quantity , type | 6, fixed. 12, re connectable (Optional) |
| Voltage regulator | Solid State |
| Insulation | Class H , |
| Temperature rise | 125 Deg. C (Class H) |
| Bearing: Quantity , type | 1, Sealed |
| Coupling | Flexible disc close coupled |
| Voltage regulation : No load to full load | 2 Phase sensing, ±1% |
| One step load acceptance | 100% of rating |
| Unbalance load capability | 25% of rated current |

Standard scope of supply:

Engine with direct injection, water-cooled engine, 3 cylinder, in-line, 4 stroke, rated at 1500RPM, conforming to **ISO 3046 / BS 5514** has the following specifications:

- Mechanical FIP
- Mechanical governor
- Turbocharger, exhaust manifold, stainless steel exhaust flexible connection
- Radiator Cooled, with after cooled
- Plate type lube oil cooler
- Filters- Fuel, Lube oil
- Dry type replaceable paper element air cleaner
- Flywheel housing and flywheel to suit single bearing alternator
- Starting motor – Electric, battery charging alternator
- First fill lube oil and coolant

Alternator: Crompton Greaves (optional -Stamford/equivalent)

- Brushless alternator
- Self-excited, self-regulated
- Class 'H' insulation limited to temperature rise
- Salient pole revolving field
- Single bearing
- Automatic voltage regulator

Acoustic enclosure–Engine alternator assembly mounted on AVM with Silencer and S.S exhaust bellow suitably optimized to meet stringent sound emission standards as laid down by MOEF / CPCB

- Base rail with draw-out type fuel tank is provided with a drain plug, air Vent inlet and outlet connections, level indicator, manhole etc.
- Sub-base fuel tank with 11 hours capacity at 75% load.
- 12 V dry, batteries with connecting leads and terminals
- 90% gloss RAL9003 white pure polyester powder coated, base in black colour.

Control panel: RAL 9003 White Powder coated control panel manufactured with CRCA sheet provides:


- Water and lube oil drain outlets located on the outer surface- Leading to ease of maintenance and cleanliness.
- MCB of suitable rating with **short circuit** protection
- Controller which displays **voltage, current, KW, PF, Frequency, KWh.**
- Indicating lamps for "Load On" and "Set Running"
- **Current transformers** of suitable ratings
- **Copper Cables** of suitable capacity with incoming and Outgoing terminations
- Control fuses duly wired and ferruled

Power cables: Uninyvin copper conductor cables between Alternator & Control panel inside the canopy.

Literature:

- Operation Manual
- General maintenance & installation Guideline
- Foundation Drawing
- Parts manual

Generator Controller (ECON M)

| CONTROLLER TYPE | FEATURES | DISPLAY PARAMETER | AUDIO VISUAL WARNING | SHUT DOWN WITH AUDIO VISUAL ANNUNCIATION |
|--|---|---|--------------------------|--|
| GCU ECON M Genset Controller  | Compact and microprocessor based fully configurable control Unit. | Engine Oil pressure | Low Oil pressure | Low Oil Pressure |
| | Graphic display | Coolant temperature | High Coolant temperature | High Coolant temperature |
| | The unique integrated DG set controller | Fuel level indication % | Low Battery Voltage | Engine Over speed |
| | Incorporate both engine and alternator parameter in one console | Battery voltage | Low fuel Level | Engine under speed |
| | Fully configurable digital out put | Engine rpm | | Low Fuel |
| | All parameter are settable and password protected | DG set Running Hours | | Over load |
| | AMF Ready | Generator Volts – Phase – Neutral & Phase – Phase | | Under voltage |
| Remote start | Generator Current (Amps) | | Over voltage | |
| | Power factor | | Over frequency | |
| | KWHR | | Under frequency | |
| | KW | | Low coolant level | |

Optional Items:

Cooling System: Heater Kit for -20 Deg. C Operation / Heater Kit for -30 deg.Cel

Electrical Systems: Alternator Space Heater / Higher Rating Battery / Battery Charger / Battery Heater / Copper Bus Bar / Sealable kWh / Earth Fault Relay / Remote Annunciator / Remote monitoring / RTD/BTD Temperature Scanner.

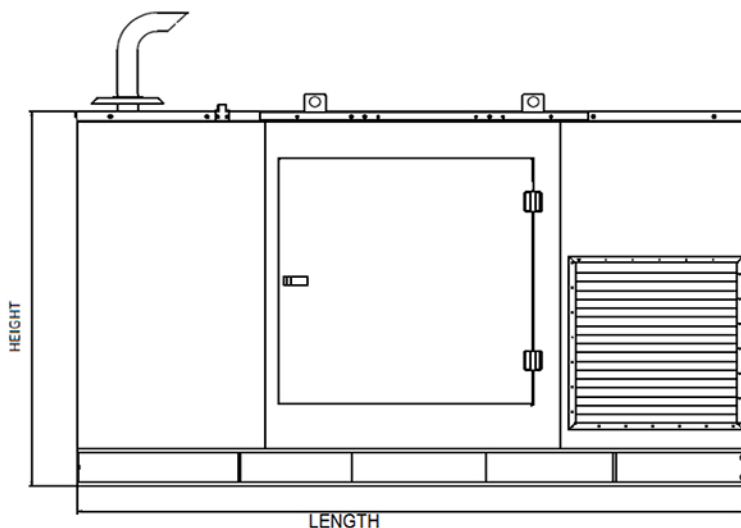
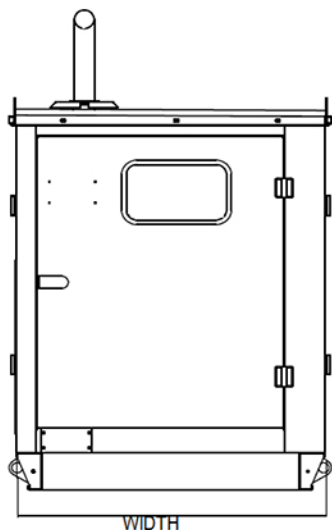
AMF & Synchronizing System: AMF panel / AMF with Auto-synchronization (Deep Sea / Woodward)

Open Unit (For Export): Exhaust silencer-Hospital/residential grade, stainless steel, flexible pipe.

Fuel System: Flexible Fuel Lines / SS fuel lines / Fuel Pressure Gauge/ fuel flow meter

Enclosed Unit:- Sound Enclosure – Super silent / External 990 Lt. Fuel Tank.

Miscellaneous: Air Cleaner (Heavy Duty)/Air Cleaner Restriction Indicator Digital / Closed crankcase ventilation



Typical Enclosed GENSET Dimensions & weight

| Model | Rating | Length(mm) | Width(mm) | Height(mm) | Weight(kg) |
|--------------|--------|------------|-----------|------------|------------|
| GPWII-PII-45 | 45 | 2500 | 1150 | 1535 | 1495 |