## Diesel Generator Set Specifications Sheet- 30 kVA

### Generator Specifications:

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genset Manufacturer</td>
<td>Greaves Power</td>
</tr>
<tr>
<td>Genset Rating</td>
<td>Prime Power</td>
</tr>
<tr>
<td>Genset Output (KVA / KW)</td>
<td>30 / 24</td>
</tr>
<tr>
<td>Genset Model</td>
<td>GPWII-PII-30X</td>
</tr>
<tr>
<td>Engine rating or Max. Power at rated RPM, in KW (BHP)</td>
<td>31.2 (42)</td>
</tr>
<tr>
<td>Engine Model</td>
<td>G-30-II</td>
</tr>
<tr>
<td>Engine Type</td>
<td>TCAC</td>
</tr>
<tr>
<td>No. of Cylinders / Cylinder arrangement</td>
<td>3 / Inline</td>
</tr>
<tr>
<td>Displacement (L)</td>
<td>2.14</td>
</tr>
<tr>
<td>Bore &amp; Stroke (mm)</td>
<td>91x110</td>
</tr>
<tr>
<td>Compression ratio</td>
<td>17.5</td>
</tr>
<tr>
<td>Rated RPM</td>
<td>1500</td>
</tr>
<tr>
<td>Governor: Type / Class of Governing</td>
<td>Mechanical/G2</td>
</tr>
<tr>
<td>Over speed trip (rpm)</td>
<td>1650</td>
</tr>
<tr>
<td>Air cleaner type / Qty</td>
<td>Dry / 01</td>
</tr>
<tr>
<td>Exhaust system</td>
<td></td>
</tr>
<tr>
<td>Maximum allowable back pressure, kPa</td>
<td>5.5</td>
</tr>
</tbody>
</table>

### Engine Electrical system: 50 Hz

- 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): 75
- Fuel consumption - LPH at % load:
  - 100%: 7.4
  - 75%: 5.9
  - 50%: 4.7
  - 25%: 3

### Lubricating Oil system :

- Lube oil sump capacity: 6.5
- Oil change period (Hrs): 500
- Oil consumption (% SFC): 0.1
- 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): 12.5 Ltr
- Water pump type: Engine mounted

### Alternator Specification:

- Voltage: 380-440V
- Frequency: 50Hz
- Current@ 0.8PF (Amps): 130/41.7
- Type: 4 Pole, Rotating field
- Exciter Type: Brushless
- 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
- 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**

- 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, Low Temperature After cooling (LTA)
  - 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**

- Meccalte / (Optional - Stamford/ Crompton Greaves /equivale)
  - Non brushed 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 polyester powder coated, base in black colour.

**Control panel**

- RAL 9003 white Powder coated control panel manufactured with CRCA sheet, control Panel is having following Features:
  - MCCB 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 Cable of suitable capacity with incoming and Outgoing terminations
  - Control fuses duly wired and ferruled

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

### Literature:

- Operation Manual
- General maintenance & installation Guideline
- Foundation Drawing
- Parts manual
Generator Controller (GADC-321)

**CONTROLLER TYPE**

**FEATURES**
- Compact and microprocessor based fully configurable control Unit.
- Graphic display
- The unique integrated DG set controller
- Incorporate both engine and alternator parameter in one console
- Fully configurable digital out put
- All parameter are settable and password protected
- Remote start

**DISPLAY PARAMETER**
- Engine Oil pressure
- Coolant temperature
- Fuel level indication %
- Battery voltage
- Engine rpm
- Generator set Running Hours
- Generator Volts – Phase – Neutral & Phase - Phase
- Generator Current (Amps)
- Power factor
- KWHR

**AUDIO VISUAL WARNING**
- Low Oil pressure
- High Coolant temperature
- Low Battery Voltage
- Low fuel Level
- Low Fuel
- Over load
- Under voltage
- Over voltage
- Over frequency
- Under frequency

**SHUT DOWN WITH AUDIO VISUAL ANNUNCIATION**
- Low Oil Pressure
- High Coolant temperature
- Engine Over speed
- Engine underspend
- Low Fuel

**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.

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**Typical Enclosed GENSET Dimensions & weight**

<table>
<thead>
<tr>
<th>Model</th>
<th>Rating</th>
<th>Length(mm)</th>
<th>Width(mm)</th>
<th>Height(mm)</th>
<th>Dry Weight(kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPWII-III-30</td>
<td>30</td>
<td>1990</td>
<td>950</td>
<td>1335</td>
<td>1025</td>
</tr>
</tbody>
</table>