

POWER RATING

| Engine Speed | Type of Operation | Engine Gross Power | |
|--------------|-------------------|--------------------|-----|
| | | kW | PS |
| 1500 rpm | Prime Power | 286 | 389 |
| | Standby Power | 315 | 428 |
| 1800 rpm | Prime Power | 315 | 428 |
| | Standby Power | 347 | 472 |

- The engine performance is as per ISO 3046. Type of operation is based on ISO 8528.
- Prime power is available for an unlimited number of hours per year in a variable load application.
- The permissible average power output over 24 hours of operation shall not exceed 80% of the prime power rating.

Engine Specifications

| | |
|---------------------|---|
| ○ Engine Type | In-Line type, 4 strokes, water-cooled Turbocharged air-to-air intercooled |
| ○ Combustion type | Direct injection |
| ○ Cylinder Type | Wet liner |
| ○ No. of Cylinders | 6 |
| ○ Bore × stroke | 126 ×130 mm |
| ○ Displacement | 9.726 liter |
| ○ Compression ratio | 16 : 1 |
| ○ Firing order | 1 – 5 – 3 – 6 – 2 – 4 |
| ○ Injection timing | 14.5 °BTDC |
| ○ Dry weight | Approx. 980 kg |
| ○ Dimension(LxWxH) | 1772 × 864 × 1220 mm |
| ○ Rotation | Anti-clockwise (Face to the flywheel) |
| ○ Fly wheel housing | SAE NO. 1 |
| ○ Fly wheel | SAE NO.14 |
| ○ Ring Gear Tooth | 160 EA |

Fuel Consumption Data

| Speed | (Liter/ Hour) | | | |
|-----------|-----------------|---------|----------|---------|
| | 1500 rpm | | 1800 rpm | |
| Rating | Prime | Standby | Prime | Standby |
| | 286 kW | 315 kW | - | - |
| 100% Load | 72.3 | 79.2 | - | - |
| 75% Load | 52.9 | | - | - |
| 50% Load | 37.4 | | - | - |
| 25% Load | 24.2 | | - | - |

Fuel System

| | |
|--------------------|-----------------------------------|
| ○ Injection pump | Direct Injection type |
| ○ Governor | Electronic type |
| ○ Feed pump | Mechanical type |
| ○ Injection nozzle | Multi-hole type |
| ○ Opening pressure | 250 kg/cm ² (3556 psi) |
| ○ Fuel filter | Full Flow, Cartridge type |
| ○ Used fuel | Diesel fuel oil |

Mechanism

| | |
|------------------------|--|
| ○ Type | Overhead valve |
| ○ Number of valve | Intake 1, exhaust 1 per Cylinder |
| ○ Valve lashes at cold | Intake. 0.3~0.4 mm Exhaust 0.4~0.5 mm |

Lubrication System

| | |
|---------------------------|---------------|
| ○ Lub. Oil Grade | CF-4 oil |
| ○ Lub. Oil Pan Capacity | 28 liter |
| ○ Max. allowable Oil Temp | 115 degree C. |
| ○ Low pressure warning | 200 kPa |
| ○ Low pressure Shutdown | 160 kPa |
| ○ Oil Consumption Rate | ≤ 0.82 g/kWh |

Cooling System

- Cooling method Fresh water forced type
- Water Pump Centrifugal, Belt driven
- Water capacity 28 liter (engine only)
- Max. Water Temp 99 degree C.
- Thermostat Open 71°C / Full 82°C
- Water in/outlet Dia 45 mm

Engineering Data

| | | 1500 rpm | | 1800 rpm | |
|----------------|--------|----------|------|----------|-----|
| | | Prime | S/B | Prime | S/B |
| ○ Media Flow | | | | | |
| Combustion Air | m3/min | 22.0 | 22.4 | - | - |
| Exhaust Gas | m3/min | 38.9 | 42.5 | - | - |
| Cooling Fan | m3/min | 412 | 412 | - | - |

○ Heat Rejection

| | |
|----------------|----|
| to Exhaust | kW |
| to Coolant | kW |
| to Intercooler | kW |
| to radiation | kW |

Intake & Exhaust System

- Max air restriction Clean 2 kPa / Dirty 5 kPa
- Exhaust back pressure Max 6 kPa

Electric System

- Charging generator 28 V × 54 A (1500 W)
- Voltage regulator Build-in type IC regulator
- Starting motor 24 V × 7.5 kW
- Battery Voltage 24 V
- Battery Capacity 200 AH

Conversion Table

| | |
|------------------------------------|----------------------------|
| in. = mm × 0.0394 | lb/ft = N.m × 0.737 |
| PS = kW × 1.3596 | U.S. gal = lit. × 0.264 |
| psi = kg/cm ² × 14.2233 | kW = 0.2388 kcal/sec |
| in ³ = lit. × 61.02 | lb/PS.h = g/kW.h × 0.00162 |
| HP= PS × 0.98635 | Cfm = m3/min × 35.336 |
| lb = kg × 2.20462 | |

Engine Layout & Dimension

