

## 1.1 CATERPILLAR PACKAGE GENSET TYPE: DE200E0-O



### 1.1.1 Engine Technical Data:

|                         |                                       |
|-------------------------|---------------------------------------|
| Type Of Engine:         | Four-Stroke, Diesel Fuel              |
| Application:            | Power Generation, Prime Power.        |
| Cylinders Arrangement:  | Inline Type                           |
| No. Of Cylinders:       | 6 Cylinder                            |
| No. Of Strokes:         | Four Strokes                          |
| Bore:                   | 105 mm                                |
| Stroke:                 | 135 mm                                |
| Displacement:           | 7 L                                   |
| Induction:              | Turbocharged Air to Air Charge cooled |
| Compression Ratio:      | 16:1                                  |
| Genset Output:          | 180.0 kVA 144.0 kW                    |
| Revolutions Per Minute: | 1500 RPM                              |

### 1.1.2 Air Inlet System:

- Air cleaner; light duty with disposable element

### 1.1.3 Exhaust System

- Exhaust silencer.

#### **1.1.4 Fuel System**

- Standard set Fuel tank / base supplied Base, formed steel with single wall integral 8-hour fuel tank;

#### **1.1.5 Starting System**

- 12V Battery with rack & cables
- **Battery Charger**

#### **1.1.6 Cooling System:**

- Radiator and cooling fan with guards
- Coolant drain line with valve
- Fan drive, battery charging alternator drive
- Caterpillar Extended Life Coolant

#### **1.1.7 Lubrication System:**

- Lubricating oil
- Oil drain line with valve

#### **1.1.8 Governing System:**

- Mechanical Governor

#### **1.1.9 Mounting System:**

- Captive linear vibration isolators between base and engine-generator Includes lifting provision and drag points
- Termination points for coolant and lube oil drain lines

### 1.1.10 Generator Technical Data:

|                     |                            |
|---------------------|----------------------------|
| Rating:             | 180.0 kVA 144.0 kW@ PF 0.8 |
| Voltage:            | 400 Volts                  |
| Frequency:          | 50 Hz                      |
| Speed:              | 1500 RPM                   |
| Insulation:         | Class "H"                  |
| No. of Bearing:     | Single Bearing             |
| Excitation:         | Self-Excited               |
| Over Speed:         | 2250 RPM                   |
| Wave Form:          | 2%                         |
| Voltage Regulator:  | Mark V                     |
| Voltage Regulation: | ± 1% (steady state)        |
| TIF:                | Less than 100              |
| Circuit breaker:    | Genset Mounted-3 Pole      |

### 1.1.11 Control Panel:

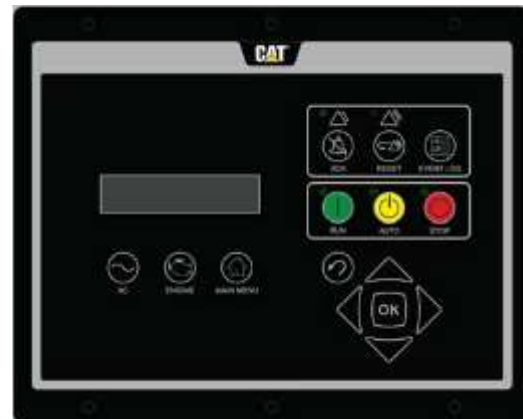
Generator - mounted, EMCP4.1 (Electronic Modular Control Panel 4.1), includes the followings:

#### 1.1.1.1 CONTROLS:

- Run / Auto / Stop control
- Speed and voltage adjust
- Local and remote emergency stop
- Remote start/stop
- Cycle crank

#### 1.1.1.2 MONITORING:

- Coolant temperature
- Oil pressure
- Engine speed (RPM)
- Battery voltage
- Run hours
- Crank attempt and successful start counter
- Voltage (L-L, L-N)
- Current (Phase)
- Average Volt, Amp, Frequency



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#### 1.1.1.3 WARNING/SHUTDOWN INDICATION:

- Control switch not in auto (alarm)
- High coolant temp (alarm and shutdown)
- Low coolant temp (alarm)
- Low coolant level (alarm)
- High engine oil temp (alarm and shutdown)
- Low, high, and weak battery voltage
- Over speed
- Over crank

#### 1.1.1.4 INPUTS & OUTPUTS:

- Two dedicated digital inputs
- Six programmable digital inputs
- Six programmable form A dry contacts

#### 1.1.1.5 PROTECTIVE RELAYING:

- Generator phase sequence
- Over/Under voltage (27/59)
- Over/Under frequency (81 O/U)

#### 1.1.1.6 COMMUNICATION:

- Primary CAN data link