Mansour House, 188 Bath Road
Slough SL1 3GA, Berkshire, UK

# 1.1 CATERPILLAR PACKAGE GENSET TYPE:C18- 600KVA Prime


## 1.1.1 Engine Technical Data:

| | |
|---|---|
| Maker: | Caterpillar Inc. |
| 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: | 145.0 mm |
| Stroke: | 183.0 mm |
| Displacement: | 18.1 L |
| Aspiration: | Air-to-Air After-cooled |
| Compression Ratio: | 14.5 : 1 |
| Genset Output: | 600 KVA - 480 eKW |
| Revolutions Per Minute: | 1500 RPM |

## 1.1.2 Air Inlet System:

- Air cleaner, dual element. (Not for Outdoor Use. Requires protection for outdoor storage)
- Turbocharger

## 1.1.3 Exhaust System

- Stainless steel exhaust flex
- Canopied Silencer

Mansour House, 188 Bath Road
Slough SL1 3GA, Berkshire, UK

### 1.1.4 Fuel System

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

### 1.1.5 Starting System

- Batteries with rack and cables
- Battery Charger 5 Amp

### 1.1.6 Cooling System:

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

### 1.1.7 Lubrication System:

- Lubricating oil
- Oil drain valves

### 1.1.8 Governing System:

- Cat Electronic Governor (ADEM A4).

### 1.1.9 Mounting System:

- Captive linear vibration isolators between base and engine-generator.
- Includes lifting provisions and termination points for coolant and lube oil drain lines

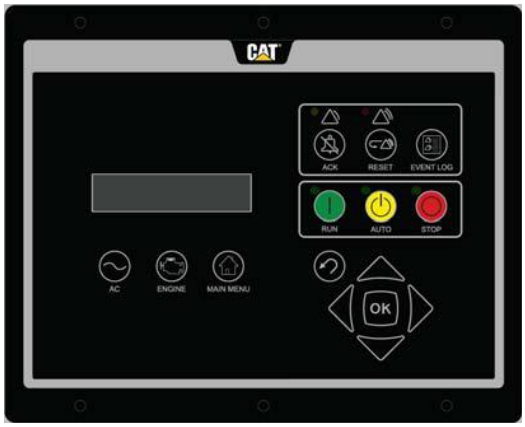
Mansour House, 188 Bath Road
Slough SL1 3GA, Berkshire, UK

## 1.1.10 Generator Technical Data:

| | |
|---|---|
| Rating: | 600 kVA , 480 eKw @ 0.8 P.F. |
| Voltage: | 400 Volts |
| Frequency: | 50 Hz |
| Speed: | 1500 RPM |
| Insulation: | Class "H" |
| No. of Bearing: | Single Bearing |
| Excitation: | Self-Excited |
| Over Speed Capability: | 150% of Synchronous speed |
| Wave Form: | Less than 2% deviation |
| Voltage Regulation: | ±1% (steady state) |
| Circuit breaker: | 1250 amp, 3 pole |

## 1.1.11 Control Panel:

Generator - mounted, EMCP4.2 The Cat® EMCP 4.2 offers fully featured power metering, protective relaying and engine and generator control and monitoring. Engine and generator controls, diagnostics, and operating information are accessible via the control panel keypads (Electronic Modular Control Panel 4.2), includes the followings:




### 1.1.11.1 CONTROLS:

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

### 1.1.11.2 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

Mansour House, 188 Bath Road
Slough SL1 3GA, Berkshire, UK

• kW, kVAr, kVA (Average, Phase, %)
• Power Factor (Average, Phase)
• kW-hr, kVAr-hr (total)

### 1.1.11.3WARNING/SHUTDOWN INDICATION:

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

### 1.1.11.4INPUTS & OUTPUTS:

• Two dedicated digital inputs
• Six programmable digital inputs
• Six programmable form A dry contacts
• Two programmable form C dry contacts
• Two digital outputs

### 1.1.11.5 PROTECTIVE RELAYING:

• Generator phase sequence
• Over/Under voltage (27/59)
• Over/Under frequency (81 O/U)
• Reverse Power (kW) (32)
• Reverse Reactive Power (kVAr) (32RV)
• Overcurrent (50/51)

### 1.1.11.6 COMMUNICATION:

• Primary CAN data link

Mansour House, 188 Bath Road
Slough SL1 3GA, Berkshire, UK

## 1.1.12 Sound Attenuated Enclosure:

**Sound Pressure Level dBA @ Full Load (Prime Power) = 72 ±3dBA@7m**


These sound attenuated, factory installed enclosures incorporate internally mounted super critical level silencers, designed for safety and aesthetic value on integral fuel tank base or optional dual wall integral fuel tank base for total fluid containment. These enclosures are of extremely rugged construction to withstand exposure to the elements and provide weather protection.

## FEATURES:

- Factory installed on integral fuel tank base
- Environmentally friendly, polyester powder baked paint
- All round overhanging base to protect enclosure
- High-grade engineering thermoplastic corner posts for protection
- Integral lifting frame
- Compression door latches giving solid door seal
- Zinc plated or black coated stainless steel fasteners
- internally mounted super critical exhaust silencing system

## Excellent Access

- Large cable entry area for installation ease
- Accommodates rear mounted breaker and control panel
- Double doors on both sides
- vertically hinged doors with solid bar door stays to hold doors open at 135° rotation
- Lube oil and coolant drains pipes to exterior of enclosure and terminated drain valves
- Radiator fill cover

Mansour House, 188 Bath Road
Slough SL1 3GA, Berkshire, UK

## Security and Safety

- Lockable access doors which give full access to control panel and breaker
- Cooling fan and battery charging alternator fully guarded
- Fuel fill, oil fill and battery can only be reached via lockable access
- externally mounted emergency stop button
- Designed for spreader-bar lifting to ensure safety
- Control panel viewing window
- Stub-up area is rodent proof