



Diesel



Watercooled

**50
Hz**

Model: ETCG125

INDUSTRIAL RANGE

Powered by CUMMINS



Generating Rates

| POWER RATING | | PRIME | STANDBY |
|-----------------------|---------|---------------------------|---------|
| POWER | kVA | 113 | 125 |
| | kW | 90 | 100 |
| Rated Speed | r.p.m | 1500 | |
| Standard Voltage | V | 400 | |
| Available Voltages | V | 400/230 - 230/132 - 230 V | |
| Rated at power factor | Cos Phi | | |

Ambient conditions of reference: 1000 mbar, 25°C, 30% relative humidity. Power according to ISO 3046 normative.

P.R.P. Prime Power - ISO 8528 : prime power is the maximum power available during a variable power sequence, which may be run for an unlimited number of hours per year, between stated maintenance intervals. The permissible average power output during a 24 hours period shall not exceed 80% of the prime power. 10% overload available for governing purposes only.

Standby Power (ISO 3046 Fuel Stop power): power available for use at variable loads for limited annual time (500h), within the following limits of maximum operating time: 100% load 25h per year – 90% load 200h per year. No overload available. Applicable in case of failure of the main in areas of reliable electrical network.



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Engine Specifications 1500 r.p.m.

| ENGINE | | PRP | | STANDBY | |
|----------------------------|--------|-------------------------------------|------|---------|-----|
| Rated Output | kW | 106 | | 116 | |
| Manufacturer | | Cummins | | | |
| Model | | 6BTA5.9-G2 | | | |
| No. of Cylinders and Build | | 4 Cycle; In-line; 6 Cylinder Diesel | | | |
| Aspiration and Cooling | | Turbocharged,After-cooled | | | |
| Bore/Stroke | mm | 102X120 | | | |
| Compress the ratio | | 17.0:1 | | | |
| Cooling system | | Water-cooled | | | |
| Engine Speed/Frequency | rpm/Hz | 1500/50HZ | | | |
| Coolant Capacity | L | 29.7 | | | |
| Starting System | | Electric 24 volt DC | | | |
| Displacement | L | 5.9 | | | |
| Lubricant system Capacity | L | 16.3 | | | |
| Battery Volatge / Capacity | | 24VDC | | | |
| Governing Type | Type | Electrical | | | |
| Air Filter | Type | Dry | | | |
| Fuel Consumption | Load | 100% | 75% | 50% | 25% |
| | L/h | 27.0 | 20.0 | 14.0 | 8.0 |

ENGINE--Industrial 4 stroke cooled diesel engine complete with air,fuel and oil filters,electric starting and charging equipment,engine protection against low water level.

COOLING--Radiator and colling fan complete with protection guards,designed to cool engine at specified output in air temperatures upto 45 °C ,radiators suitable for higher temperatures are available.Low water level protection fitted as standard.

ELECTRICAL SYSTEM--24V upto.Axial type starter motor,battery charging alternator,high capacity lead acid battery,and battery tray mounted on the generator base frame,and heavy duty interconnecting cable with terminations.

EXHAUST SYSTEM--Heavy duty industrial exhaust silencer with flexible piping.



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Alternator Technical Specifications

| ALTERNATOR BRAND | | LEROY SOMER | STAMFORD |
|---------------------------|-------|-------------------------|----------|
| Model | | LSA44.2S7 | UCI274D |
| Exciter System | | Self-excited, brushless | |
| Poles | Num | 4 | |
| Cooling Fan | | Cast alloy aluminum | |
| Bearing | | Single,double shielded | |
| Windings | | 100% copper | |
| Connection Type | | Reconnectable | |
| Insulation Type | Class | Class H | |
| Pitch | | 2/3 | |
| Amortisseur Winding | | Full | |
| Voltage Regulator | | A.V.R. (Electronic) | |
| Steady Voltage Precision | | ± 1% | |
| Underspeed Protection | | Standard | |
| Overexcitation Protection | | IP23 | |
| TIF (1960 Weightings) | | <50 | |

ALTERNATOR--Brushless,self exciting,self regulation,sreen protected,drip proof rated in accordance with IEC60034.Voltage regulation maintainted within ±0.5% from no load to full load.between 0.8 lagging and unity.All standard voltages available.

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Control Panel Technical Specifications

Control Panel- SMARTGEN 6110/6120

The base mounted control panel in a vibration isolated sheet steel enclosure. The control panel is equipped as follows:

- a) Instruments: Analogue Voltmeter, Hours Run Meter, Water pressure Meter.
- b) Controls: Emergency Stop Pushbutton, Voltmeter Phase Selector Switch.
- c) Control module: Standard collocation is smartgen Auto start with AMF.

Smartgen®

Main Features:

- Δ Automatic mains failure
- Δ Engine control, Generator protection
- Δ Built in alarms and warnings
- Δ Remote Start operation available
- Δ Fuel pump control
- Δ Mains simulation
- Δ Block heater control
- Δ Field adjustable parameters
- Δ Free MS-Windows Remote monitoring
- Δ LED displays
- Δ Configurable analogue inputs
- Δ I/O expansion capability



Protection Circuits

- WARNING
- Battery charge failure
- Low battery voltage
- SHUT DOWNS
- Fail to start
- Emergency stop
- Low oil pressure
- High engine temperature
- Over /Under speed
- Under/over generator frequency
- Failed to reach loading voltage
- Electrical trip
- Generator over current

Instruments

- ENGINE
- Engine speed
- Oil pressure
- Coolant temperature
- Run time
- Battery volts
- TOR
- Voltage (L-N)
- Current (L1-L2-L3)
- Frequency
- Mains
- Voltage (L-L, L-N)



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Generating Sets Standard Features

Three phase four wire, output voltage 400V/230V, 50HZ, between 0.8 lagging, protection capability according with the standard of NAME1 and IP23.

General Features:

- Δ Composed of Cummins diesel engine and Stamford or Leroy somer alternator
- Δ Oil and fuel filter fitted, water separator
- Δ Lube-oil drain valve fitted
- Δ Electric Starter Charge motor 24 V.D.C
- Δ Water-cooled
- Δ 8-hours operation base tank
- Δ Auto start
- Δ Optional soundproof and weatherproof canopy
- Δ 3 pole MCCB Delixi breaker
- Δ Operation & Maintenance manual
- Δ Special Integrated Steel Base tank and sprayed overall in gloss enamel paint

Voltage Regulation:

- Voltage regulation maintained within $\pm 0.5\%$
- Between 0.8 and 1.0 lagging and unity
- From no load to full load
- At speed droop variation upto 4.5%

Frequency Adjustable Ratio:

- Change load from 0-100%, within 1.0% (electric speed regulator), within 4.5% (mechanical speed regulator)

Frequency Undulation:

- load from 0-100%, frequency undulation within 0.25%
- No load wire volts max undulation ration\ within 1.8%
- Three Phrase balanced load in the order of 5%
- Effect factor of Telecom
- TIF better than 50
- THF to IEC60034 Part 40 better than 2%

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Soundproofed Version Features

Robust Corrosion Resistant Construction

- Δ Black finish stainless steel lock and hinges
- Δ Body made from steel components treated with polyester powder coating

Excellent Access for Maintenance

- Δ Two large doors on each side
- Δ Radiator fill access plate
- Δ Lube oil and cooling water drains pipes to exterior of the enclosure

Security and Safety

- Δ Control panel viewing window in a lockable access door
- Δ Emergency stop push button (red) mounted on enclosure interior
- Δ Cooling fan and battery charging alternator fully guarded
- Δ Exhaust silencing system totally enclosed for operator safety





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Generating Sets other Features

Generating Sets Optional Features

- ΔLow fuel level alarm shutdown
- ΔAutomatic Fuel Filling System
- ΔEngine oil feeding and drain pump
- ΔAuto Transfer Switch(ATS)
- ΔParallel control panels
- ΔCircuit Breaker MCCB & ACB
- ΔRemote Control Panel
- Δweatherproof/soundproof Canopy
- ΔTrailer type Gensets

Quality Standards

ISO9001:2000,ISO14000,ISO3046
ISO8528 BS4999
BS5514,AS1359,ICE34
CE Compliance

Gensets Dimensions & Weight

Open type:LxWxH (mm) Net Weight Kgs

2200*1030*1580,1400 KGS

Silent type:LxWxH (mm) Net Weight Kgs

3300*1080*1970, 1600kgs