



ATC500, DIESEL GENSET

Powered by Cummins Engine
50Hz, 380V, 1500RPM

POWER BRITISH LTD.

www.powerbritish.co.uk



ISO 9001 : 2008

STANDARD SPECIFICATION

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 up to 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 ratio within 1.8%
- Three phrase balanced load in the order of 5%

Effect factor of telecom

- TIF better than 50
- THF to BS4999 Part 40 better than 2%

Electromagnetism

In compliance with BS800 and VDE levels G and N

General Features

- Heavy-duty industrial diesel engine
- Brushless synchronous alternators: four-pole construction, dynamically balanced
- Prototype tested and production tested
- Gen-set accepts rated load in one step
- 8-hour base mounted fuel tank
- Operation & Maintenance manual
- Special Integrated Steel Base tank and sprayed overall in gloss enamel paint
- Canopy Color: white, yellow, Green
- Optional weather-proof and sound attenuated enclosures available
- Full range of accessories and options available
- Battery Rack and batteries
- Manufactured in an ISO-9001 certified facility
- Backed by a world wide network of parts and service center

CRITERION

ISO 9001:2000, ISO3046, ISO8528 BS4999
BS5000PT99, BS5514, AS1359, IEC34 UTE5100
VDE0530, CSA A22.2, CEMA, NEA



| | |
|--------------------|---------------------|
| Genset model | ATC500 |
| Power Output (PRP) | 400KW 500KVA |
| Power Output (ESP) | 440KW 550KVA |
| Engine Model | KTA 19-G4 / QSX15G8 |
| Alternator | EUROPEAN TYPE |
| Canopy Type | C500 |

1. Available in the following voltages:
440/254-415/240V-400/230V-380/220V -220/127V -200/115V.
2. ESP: Standby Power-Standby duty operation under variable, without overload.
3. PRP: Prime Power-Continuous duty operation, under variable load
24/24-h-10% overload permissible 1 hour/12hours.
4. This generator works normally at 55° C with derating.



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ATC500, DIESEL GENSET

Cummins Engine

Designed with Safety in Mind

The fully GMSC Range generator set powered by the Cummins engines which manufacturing in USA & UK. Cummins water cooled Diesel engine, oil and fuel filter fitted, water separator, Lube-oil drain valve fitted.

GENSET SPECIFICATION

Cast Iron Skirted Block: With main bearing supports between each Cylinder , for maximum strength and rigidity, low weight, and optimum crank shaft support.

Compact Size: For ease of installation and easy access for routine maintenance.

Direct Fuel Injection System: With high swirl intake ports for thorough mixing of air and fuel to provide low fuel consumption.

Forged Steel, I-Beam Cross Section Connecting Rods:

With angle split cap-to-rod interface and cap screw attachment For maximum structural strength and ease of service.

Starting :24 volt negative earth. battery charging alternator 35 amp on engine. Cranking current 640 amps at 0 °c.

Fuel System

24 volt fail safe actuator. Spin-on paper element fuel filters with Bosch fuel pump injection system with integral Electronic governor. Dual flexible fuel lines And connectors. Standard fuel water separator.

Turbocharger: Holset exhaust gas driven turbocharger mounted at top of engine. Turbocharging provides increased power, improved fuel economy, altitude compensation, and lower smoke and noise levels.

Filters.

Air cleaner with dry element and restriction indicator. Spin full flow lube oil filter.

Cooling

Oil cooler, Drain Tap

GENSET SPECIFICATION

| | | |
|-----------------------------|--------------------------------------|-----------|
| Engine Model | KTA19-G4 / QSX15-G8 | |
| Type | 6-cycle diesel engine | |
| Apiration | Turbocharged And Air-Air Aftercooled | |
| Bore x Stroke | mm | 159 x 159 |
| Compress the ratio | 13.9:1 | |
| Engine Speed | rpm | 1500 |
| Continuous Rated Output /kw | 440 | |
| Oil Capacity | L | 55 |
| Coolant Capacity | L | 30 |
| Starting System | Electric - 24 volt DC | |
| Displacement | L | 19 |
| Lubricant | L | 46 |
| Battery Voltage /Capacity | 24VDC/100A/190 | |
| Governing Type | Electrical | |

Exhaust System

| | | |
|---------------------|------|------|
| Exhaust Gas Flow | m³/h | 6883 |
| Exhaust Temperature | °c | 538 |

Fuel System

| | | |
|-----------------------|------|-----|
| Fuel Consumption 100% | L/hr | 107 |
| Fuel Consumption 75% | L/hr | 82 |
| Fuel Consumption 50% | L/hr | 57 |
| Tank (L) | 970 | |

AC ALTERNATOR

EUROPEAN TYPE GENERATOR END

EUROPEAN TYPE has a long history of producing high-quality reliable products for the power generation market. Their portfolio of high quality generator ends is recognized as an industry standard.

Alternator Technical Data

European Type AC alternator

- Brushless, self exciting
- Class 'H' insulation
- Standard degree of protection is IP23
- Self regulating
- With fan cooling
- Resist humid grease
- AC excitation, rotating rectification tube
- Stator grease insulation covered
- Rotator and excitation high polymer, Resist the corruption of oil and acid.
- Rotator balance is in accordance with BS5625 standard 12.5
- High-quality lubrication sealed long-time bearing
- Rotator silicon steel close tight

Alternator Technical Data

| | |
|----------------------------|--------------------------|
| Generator Frame | 18/22 |
| Exciter | Brushless |
| Cooling Fan | Cast alloy aluminum |
| Bearing | Single, double shielded |
| Windings | 100% copper |
| Connection Type | Reconnectable |
| Insulation Type | Class H |
| Pitch | 2/3 |
| Amortisseur Winding | Full |
| Voltage Regulator | AS440 / R250 |
| Voltage Regulation NL - FL | ± 1.5% |
| Underspeed Protection | Standard |
| Overexcitation Protection | IP23 |
| Standards | NEMA, IEC, IEEE, CSA, BS |
| Phase Sequence | A(U), B(V), C(W) |
| TIF (1960 Weightings) | <50 |
| Excitation System | PMG - optional |

CONTROL PANELS

DEESEA ELECTRONICS CONTROL PANEL DSE-7320 / 7420

The Model 7320 / 7420 is an **Automatic Engine Control Module** which has been designed to allow the OEM to meet demand for increased capability within the industry. The module has been designed to automatically start and stop the engine, indicating the operational status and fault conditions, shutting down the engine and indicating the engine failure by means of a graphical LCD display and a flashing LED on the front panel. Selected operational timers and alarms can be adjusted by the customer.

Configuration of the module can be carried out manually utilising the front panel editor, or alternatively by PC, using the 7320 / 7420 software. Operation of the module is via pushbuttons mounted on the front panel with STOP, AUTO and MANUAL modes.

A further pushbutton provides an LCD DISPLAY SCROLL function to view the instrumentation.

Multiple alarm channels

- ▶ Under/Over speed
- ▶ Charge alternator failure
- ▶ Emergency stop
- ▶ Low oil pressure
- ▶ High engine temperature
- ▶ Fail to start
- ▶ Fail to come to rest
- ▶ Loss of speed sensing signal

Digital Inputs

- ▶ Emergency Stop - A N/C DC positive input
- ▶ 5 fully configurable warning or shutdown inputs.

Metering

Generator Volts L1-N, L2-N, L3-N
 Generator Volts L1-L2, L2-L3, L3-L1
 Generator Amps L1, L2, L3
 Generator Frequency Hz
 Engine Speed RPM
 Engine Oil Pressure (PSI & Bar)
 Engine Temperature (°C & °F)
 Plant Battery Volts
 Engine Hours Run

- ▶ Fully PC or front panel configuration
- ▶ Automatic engine starting & stopping
- ▶ Automatic shutdown on fault condition
- ▶ Custom graphical icon type display
- ▶ Provides engine and generator instrumentation
- ▶ Provides engine alarms and status information
- ▶ LED & LCD alarm indication
- ▶ Compatible with 5200, 5300 and 5500 series modules for easy upgrade path.



Control Panel By:

FEATURES

- ▶ Micro-processor based design

OPTIONAL FEATURES

- ▶ Low fuel level alarm shutdown
- ▶ Automatic Fuel Filling System
- ▶ Engine Oil Heater
- ▶ Remote Radiator
- ▶ Charge Voltmeter
- ▶ Charge Ammeter
- ▶ Critical Silencer
- ▶ PMG
- ▶ Tool Kit
- ▶ Residential Silencer



- ▶ Protection for Alarm Module & Auxiliary Relay
- ▶ Circuit Breaker MCCB & ACB
- ▶ Mains auto-charger
- ▶ Engine/Alternator Heaters
- ▶ Trailer
- ▶ Enclosures or Soundproof Canopy
- ▶ Manual Sump Oil Drain Pump
- ▶ Packing-Export Box
- ▶ And More

- ▶ Auto Transfer Switch (ATS)
- ▶ Earth Fault Relay
- ▶ Remote Monitor Interface

- ▶ Protection for Alarm Module & Auxiliary Relay
- ▶ Parallel Control Panel
- ▶ Circuit Breaker MCCB & ACB
- ▶ Remote Control Panel

Voltage Connections

- 277/480V,3 Phase
- 254/440V,3 Phase
- 240/416V,3 Phase
- 230/400V,3 Phase
- 220/380V,3 Phase
- 127/220V,3 Phase
- 115/200V,3 Phase
- 110/190V,3 Phase



DSE-550 Parallel Control Panel system

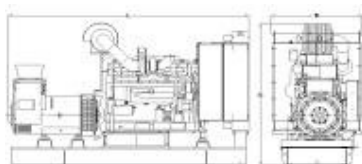


DSE-7320 Remote Control Panel

Control your generator remotely



DIMENSIONS

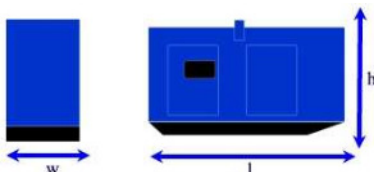


Open Model Excluding option

Overall size (L*W*h), mm:

3450*1312*2146

Weight (kg):4211



Enclosure Unit

Overall size (L*W*h), mm:

4362*1500*2519

Weight (kg) :5150

In line with our policy of continuous product development, we reserve the right to change specification without notice.

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