

# ATC500, DIESEL GENSET

## Powered by Cummins Engines

50Hz , 380V , 1500RPM



**A.T. GENERATORS**  
www.atgenerators.com

### 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 phase 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 / QSX15-G8
Alternator	EUROPEAN
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 working normally under 55°C

# 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

55 °c radiator as standard 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	m <sup>3</sup> /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 GENERATOR END

EUROPEAN 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 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 / R448
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 5110

The Model 5110 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 5110 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.

- ▶ 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

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



### Multiple alarm channels

### FEATURES

- ▶ Micro-processor based design
- ▶ Fully PC or front panel configuration

Control Panel By:



## 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



- ▶ 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

- ▶ 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

### 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

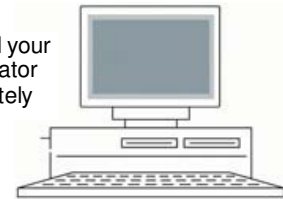


PLC-550 Parallel Control Panel system

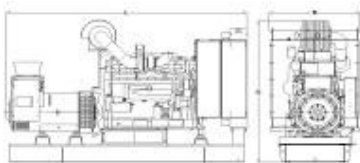


PLC-5220 Remote Control Panel

Control your generator remotely



## DIMENSIONS



### Open Model Excluding option

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

3450\*1312\*2146

Weight (kg):4211

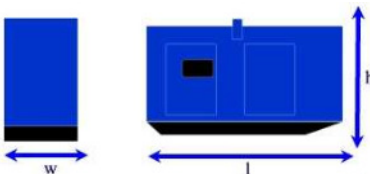


### Enclosure Unit

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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