

# **ATC15, DIESEL GENSET**

Powered by Cummins Engine 50Hz, 400V, 1500RPM

# BAGHDAD AL SALAM CO.

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# STANDARD SPECIFICATION

# Voltage Regulation

Voltage regulation maintained within ±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: Yellow, White and 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       | ATC15             |
|--------------------|-------------------|
| Power Output (PRP) | 12KW              |
|                    | 15KVA             |
| Power Output (ESP) | 13.2KW            |
|                    | 16.5KVA           |
| Engine Model       | 3A1.4-G1 / X2.5G2 |
| Alternator         | EUROPEAN TYPE     |
| Canopy Type        | C15               |

- 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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# ISO 9001 Registered Quality Assured IMS Certification





# **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

**ATC15, DIESEL GENSET** 

**Cast Iron Skirted Block:** With main bearing supports between each cylinder, for maximum strength and rigidity, low weight, and optimum crankshaft 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:

Withangle split cap-to-rod interface and capscrew attachment formaximum structural strength and ease of service.

**Starting :** 24 volt negative earth. battery charging alternator 35 amp on engine. Cranking current 640 amps at  $0^{\circ}$ 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.

#### Filters.

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

#### Cooling

Oil cooler, Drain Tap

# **GENSET SPECIFICATION**

| Engine Model         |           | 3A1.4-G1 / X2.5G2       |
|----------------------|-----------|-------------------------|
| Туре                 |           | 4-cycle diesel engine   |
| Apiration            |           | Natural                 |
| Bore x Stroke        | mm        | 102 x 120               |
| Compress the ratio   |           | 16.5:1                  |
| Engine Speed         | rpm       | 1500                    |
| Continuous Rated O   | utput /kw | 13.2                    |
| Oil Capacity         | L         | 9                       |
| Coolant Capacity     | L         | 8                       |
| Starting System      |           | Electric - 24 volt DC   |
| Displacement         | L         | 3.9                     |
| Lubricant            | L         | 9.5                     |
| Battery Voltage /Cap | acity     | 24VDC/100A/120          |
| Governing Type       |           | Mechanical / Electrical |

| Exhaust System               |          |          |
|------------------------------|----------|----------|
| Exhaust Gas Flow             | m³/h     | 254      |
| Exhaust Temperature          | e °c     | 410      |
| Fuel System Fuel Consumption | า 100%   |          |
| L/hr                         | 1 100 /6 | 2.6      |
| Tank (L)                     |          | 95       |
| Litres / hour                |          |          |
| 10.0                         | 1 1      |          |
| 8.0 1500 RPM                 | Jjj      |          |
| 6.0                          | ļļ.      |          |
| 4.0                          |          |          |
| 4.0                          |          |          |
| 2.0                          |          |          |
| 0.0                          | <u> </u> |          |
| 0 5 10                       | 15 20 25 | 30 35 40 |

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# **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                | SX460 / R230             |  |
| 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**

#### DEEPSEA ELCTRONICS 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

**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.

customer.

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

#### **FEATURES**

- ► Micro-processor based design
- Fully PC or front panel configuration
- Automatic engine starting & stopping
- Automatic shutdown on fault condition
- Custom graphical icon type display
- Provides engine and generator instrumen tation
- ▶ 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:











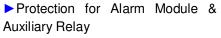
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# **OPTIONAL FEATURES**

- 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





- ► 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





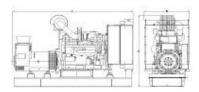
DSE-550 Parallel Control Panel system



DSE-7320 Remote Control Panel



# **DIMENSIONS**

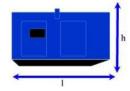


# **Open Model Excluding option**

Overall size (L\*W\*h), mm: 1481\*690\*1323 Weight (kg):628







#### **Enclosure Unit**

Overall size (L\*W\*h), mm: 2175\*1000\*1582 Weight (kg):850

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

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