



**ATA**

Makes Life Brighter

*Generators & Switchgear Solutions*

**ATA,Cummins, QSG12-G4, 416 KVA**

**1500 rpm (50 Hz Ratings)**

| Gross engine output |         |         | Net engine output |         |         | Typical generator set output |     |             |     |            |     |
|---------------------|---------|---------|-------------------|---------|---------|------------------------------|-----|-------------|-----|------------|-----|
| Standby             | Prime   | Base    | Standby           | Prime   | Base    | Standby (ESP)                |     | Prime (PRP) |     | Base (COP) |     |
| kWm/BHP             |         |         | kWm/BHP           |         |         | kWe                          | kVA | kWe         | kVA | kWe        | kVA |
| 409/549             | 371/498 | 334/448 | 390/523           | 356/477 | 319/428 | 364                          | 455 | 333         | 416 | 298        | 372 |

**1800 rpm (60 Hz Ratings)**

| Gross engine output |         |         | Net engine output |         |         | Typical generator set output |     |             |     |            |     |
|---------------------|---------|---------|-------------------|---------|---------|------------------------------|-----|-------------|-----|------------|-----|
| Standby             | Prime   | Base    | Standby           | Prime   | Base    | Standby (ESP)                |     | Prime (PRP) |     | Base (COP) |     |
| kWm/BHP             |         |         | kWm/BHP           |         |         | kWe                          | kVA | kWe         | kVA | kWe        | kVA |
| 466/625             | 424/569 | 382/512 | 445/597           | 408/547 | 366/491 | 418                          | 523 | 383         | 479 | 344        | 429 |

**Fuel Consumption 1500 (50 Hz)**

| %                       | kWm | BHP | L/hr | US Gal./hr |
|-------------------------|-----|-----|------|------------|
| <b>Standby Power</b>    |     |     |      |            |
| 100                     | 409 | 549 | 92   | 24.2       |
| <b>Prime Power</b>      |     |     |      |            |
| 100                     | 371 | 498 | 82   | 21.5       |
| 75                      | 279 | 374 | 60   | 15.9       |
| 50                      | 186 | 249 | 41   | 10.8       |
| 25                      | 93  | 125 | 22   | 5.7        |
| <b>Continuous Power</b> |     |     |      |            |
| 100                     | 334 | 448 | 73   | 19.2       |

**Fuel Consumption 1800 (60 Hz)**

| %                       | kWm | BHP | L/hr | US Gal./hr |
|-------------------------|-----|-----|------|------------|
| <b>Standby Power</b>    |     |     |      |            |
| 100                     | 466 | 625 | 107  | 28.3       |
| <b>Prime Power</b>      |     |     |      |            |
| 100                     | 424 | 569 | 96   | 25.2       |
| 75                      | 318 | 427 | 69   | 18.3       |
| 50                      | 212 | 285 | 47   | 12.5       |
| 25                      | 106 | 142 | 26   | 6.8        |
| <b>Continuous Power</b> |     |     |      |            |
| 100                     | 382 | 512 | 84   | 22.2       |

| General Engine Data         |  |
|-----------------------------|--|
| Fuel Rating                 | FR21318                                    |
| Type                        | 4 cycle, in-line, turbocharged, air-cooled |
| Bore mm                     | 132 mm (5.20 in.)                          |
| Stroke mm                   | 144 mm (5.67 in.)                          |
| Displacement litre          | 11.8 litre (720 in. <sup>3</sup> )         |
| Cylinder block              | Cast iron, 6 cylinder                      |
| Battery charging alternator | 110 amps                                   |
| Starting voltage            | 24-volt                                    |
| Fuel system                 | Cummins HPCR                               |
| Fuel filter                 | Spin-on fuel filters with water separator  |
| Lube oil filter type(s)     | Spin-on full flow filter                   |
| Lube oil capacity (l)       | 34.1                                       |
| Flywheel dimensions         | SAE 1                                      |

| Coolpac Performance Data                      |  |
|---|--|
| Cooling system design                         | Air-air charge cooled  |
| Coolant ratio                                 | 50% ethylene glycol; 50% water                                 |
| Coolant capacity (l)                          | 48.0   |
| Limiting ambient temp.** (°C)                 | 55   |
| Fan power (kWm)                               | 24.3   |
| Cooling system air flow (m <sup>3</sup> /s)** | 8.4  |
| Air cleaner type                              | Normal duty dry replaceable element with restriction indicator |

**Dimensions**

| Type   | Length (mm) | Width (mm) | Height (mm) | Fuel Tank ( L ) | Weight (KG) |
|--------|-------------|------------|-------------|-----------------|-------------|
| Open   | 3515        | 1250       | 2204        | 730             | 3097        |
| Closed | 4200        | 1500       | 2200        | 730             | 4620        |

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### Features

Fuel System - Bosch P7100 type mechanical fuel injection pump have high injection pressure - optimize engine performance and establish an unrivalled reputation for reliability.

Electronic Governor Control Unit - Strengthening electronic governor control unit can optimize engine speed stability and reliability.

Holset HE400 and HE500 Non Wastegate Turbocharger - Increased power, fuel economy, and lower smoke and noise levels.

Electronic Fuel Shot Off Valve - Increased safety for mechanical fuel system engine.

Integrated Block Design - Integrated fluid circuits replace hoses and eliminate potential leaks.

24-Valve Cylinder Head – Four valves per cylinder for increased power with faster response and fuel economy.

Coolpac Integrated Design - Products are supplied complete with cooling package and air cleaner kit for a complete power package. Each component has been specifically developed and rigorously tested for G-Drive products, ensuring high performance, durability and reliability.

Service and Support - G-Drive products are backed by an uncompromising level of technical support and after sales service, delivered through a world class service network.

### Ratings Definitions

**Emergency Standby Power (ESP):** Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source.

Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

**Limited-Time Running Power (LTP):** Applicable for supplying power to a constant electrical load for limited hours. Limited-Time Running Power (LTP) is in accordance with ISO 8528.

**Prime Power (PRP):**

Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

**Base Load (Continuous) Power (COP):** Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) in accordance with ISO 8528, ISO 3046, AS 2789, DIN6271 and BS 5514.

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**ALTERNATOR SPECIFICATIONS**

**TAL 047 - 410 to 660 kVA - 50 Hz / 510 to 825 kVA - 60 Hz**

|  |   |   |                  |
|--|---|---|------------------|
| Insulation class                               | H   | Excitation system 6-wire                                | SHUNT AREP / PMG |
| Winding pitch                                  | 2/3 (wind.6S - 6-wire / wind.6 - 12-wire) | AVR type  | R150 R180        |
| Number of wires                                | 6-wire (12-wire option)                   | Excitation system 12-wire (option)                      | SHUNT AREP / PMG |
| Protection                                     | IP 23                                     | AVR type  | R250 R180        |
| Altitude                                       | ≤ 1000 m                                  | Voltage regulation (*)                                  | ± 1 %            |
| Overspeed                                      | 2250 R.P.M.                               | Total Harmonic Distortion THD (**) in no-load < 1.5 %   |                  |
| Air flow (m³/s)                                | 0.9                                       | Total Harmonic Distortion THD (**) in linear load < 5 % |                  |
| Air flow (m³/s)                                | 1.1                                       | Waveform: NEMA = TIF (**)                               | < 50             |
| AREP Short-circuit current = 2.7 In : 5 second |   | Waveform: I.E.C. = THF (**)                             | < 2%             |

**Control Panel**

**DSE7320 MKII**

**Auto Mains (Utility) Failure Control Module**

The DSE7320 MKII is a powerful, new generation Auto Mains (Utility) Failure genset control module with a highly sophisticated level of new features and functions, presented in the usual DSE user-friendly format. Suitable for a wide variety of single, diesel or gas Gen-set applications.

**OVERALL SIZE**

245 mm x 184 mm x 51 mm (9.6" x 7.2" x 2.0")

**PANEL CUTOUT SIZE**

220 mm x 160 mm (8.7" x 6.3")

**MAXIMUM PANEL THICKNESS**

8.0 mm (0.3")

**PRODUCT VARIANTS**

7320-03 - 7320 MKII Auto Mains (Utility) Failure Control Module



**Optional configurations:**

**Engine accessories:**

- Heavy-duty air filter
- Coolant heater
- Lubricant oil heater
- Fuel and Water Separator
- Lube oil rotary pump

**Alternator And Accessories:**

- Leroy somer/stamford
- Anti condensation heater
- PMG + AVR ◊ Double bearing alternator High voltage\_\_\_\_\_kV
- RTDs for Bearing and winding

**Cooling System:**

- 55 degree Radiator
- Remote Radiator

**Control System:**

- AMF
- Parallel
- Practical type in low temperature environment
- Control Screen Heater
- Remote Annunciators
- Other (ComP, DEIF)

**Circuit Breaker:**

- 3/4 poles
- Fixed/handcart type
- Electric mechanism

**Automatic Transfer Switch (ATS):**

- ATS cabinet
- Contractor type ATS
- Motorized changeover type ATS

**Start Battery:**

- Nickel-cadmium battery
- Maintenance-free battery
- Battery charger and selector switch
- Charging current meter

**External Fuel Tank:**

- Single /double wall fuel tank (500-5000L)
- Fuel Transfer pump

**Exhaust Muffler:**

- Residential grade
- Critical grade
- Hospital grade

**Available for voltages :**

- 400/230V, 480/277V, 380/220V, 440/254V, 416/240V, 220/127V, 208/120V

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### Prime Rating:

Unlimited hours usage, with an average load factor of 80% over each 24 hours period. 10% overload is available for 1 hour in every 12 hours operation. 0 overload is permitted on standby power.

### Standby Rating:

Limited to 500 hours annual usage, with an average load factor of 80% of the published standby power rating over each 24 hours period. Up to 300 hours of annual usage may be run continuously. No over-load is permitted on standby power.

### Engine:

Cummins, including air filters, fuel filters, oil filter, starting motor and charging alternator etc.

### Warranty policy:

ATA products have a warranty for 12 months or 1000 hours whichever occurs first against any manufacturing defects

Wearing parts (filters), incorrect man-made operation, maintenance failures are excluded from the warranty policy

### Radiator:

50°C, fan protective shroud

### Fuel Tank:

Capacity of fuel tank is for 8– 10 hours running  
Built in fuel tank up to 800 kVA

### Circuit Breaker:

3 pole LS MCCB

### Alternator Type:

brushless AC alternator

### Control system alarms:

Over and Under Speed  
Low and High Battery Volt. Start and Stop Failure Over Current Under / Over Generator Voltage  
Low Oil Pressure  
Emergency stop High engine temperature



**STAMFORD**  
power generation

**DSE**



**LEROY  
SOMER**

Manufacturer reserves the right to make changes in model, technical specifications, color, equipment and accessories without prior notice. All photos are representative and may not reflect exact mode.

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