

## Specification and Application Data

### Rating Range - 60 Hz Operation

Standby: kW 93-101  
 kVA 116-127

Prime: kW 90-92  
 kVA 113-115

Elecon industrial generators are efficient and reliable, providing a versatile source of power for standby or prime power applications. All generator sets and components are factory built and productions tested. The genset features a John Deere 4-cycle diesel engine certified by the EPA to Tier 3 non-road emission regulations, and an AC high capability alternator regulated by an automatic voltage regulator. The set is unified by a heavy-duty chassis, and is protected by a best-in-class sound attenuated enclosure.

### Features

- Engine generator set tested to ISO 8528-5.
- Genset engine certified by the Environmental Protection Agency (EPA) to Tier 3 non-road emission regulations.
- The brushless, 12-wire, single bearing, generator has 4 poles, an automatic voltage regulator, and permits broad range reconnect ability.
- Genset is CSA certified.
- Vibration isolation rubbers eliminate the need of vibration spring isolators.
- Global product support.
- Operations and maintenance manuals.
- One-Year Warranty with extended warranties available.
- Heavy-duty construction, designed for use in prime or standby applications.
- Assembled in Canada.

### Genset Ratings

| Voltage<br>N-L   L-L | Ph | Hz | 150°C Rise<br>STANDBY Rating |     |      | 125°C Rise<br>PRIME Rating |     |      |
|----------------------|----|----|------------------------------|-----|------|----------------------------|-----|------|
|                      |    |    | kW                           | kVA | Amps | kW                         | kVA | Amps |
| 120/208              | 3  | 60 | 100                          | 125 | 348  | 91                         | 113 | 317  |
| 120/240              | 3  | 60 | 100                          | 125 | 301  | 91                         | 113 | 273  |
| 277/480              | 3  | 60 | 101                          | 127 | 153  | 92                         | 115 | 138  |
| 347/600              | 3  | 60 | 101                          | 127 | 122  | 92                         | 115 | 110  |

Ratings: Standby ratings are continuous for the duration of any power outage. No overload capacity is specified at this rating. Prime ratings are continuous per BS5514, DIN 6271, IDO-3046, and IEC34-1, with 10% overload capacity one in twelve hours. Larger alternators may be used to meet special application requirements. Elecon reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

General Guidelines for Deration:

ALTITUDE: Derate 1.5% per 1000 ft (305 m) elevation above 3300 ft (1003 m).

TEMPERATURE: Derate 0.5% per 10°F (5.5°C) temperature above 77°F (25°C).

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### Engine Specifications

| GENERAL DATA            |                                 |             |             |
|-------------------------|---------------------------------|-------------|-------------|
| Manufacturer            | John Deere                      |             |             |
| Engine Model            | 4045HF285                       |             |             |
| EPA Certification       | Tier 3                          |             |             |
| Rated                   | RMP                             | 1800        |             |
| Nominal Power (PRIME)   | kW - HP                         | 107         | 144         |
| Nominal Power (STANDBY) | kW - HP                         | 118         | 158         |
| Engine Type             | Diesel 4 Stroke                 |             |             |
| Injection Type          | Unit Injection                  |             |             |
| Aspiration Type         | Turbocharged                    |             |             |
| Cylinder Arrangement    | 4 - L                           |             |             |
| Bore and Stroke         | (mm) - in                       | (106 x 127) | 4.19 x 5.00 |
| Displacement            | L - in <sup>3</sup>             | 4.5         | 275         |
| Cooling System          | Liquid (Cool-Guard II)          |             |             |
| Governor Type           | Electronic                      |             |             |
| Air Cleaner Type        | Medium duty w/ double cartridge |             |             |
| Compression Ratio       | 19.0 : 1                        |             |             |

### Application Data

| EXHAUST SYSTEM                |                                              | PRIME            | STANDBY          |
|-------------------------------|----------------------------------------------|------------------|------------------|
| Manifold Type                 |                                              | Dry              | Dry              |
| Outlet Diameter               | mm - in                                      | 80 - 3.152       |                  |
| Max. Temperature at Full Load | °C                                           | 560              | 580              |
|                               | °F                                           | 1040             | 1076             |
| Exhaust Gas Flow              | kg/h - lb/h                                  | 534.24 - 1177.79 | 574.56 - 1266.68 |
|                               | (m <sup>3</sup> /min) - ft <sup>3</sup> /min | (21.2) - 750     | (22.8) - 805     |
| Max. Allowed Back Pressure    | (mm/H <sub>2</sub> O) - in/H <sub>2</sub> O  | 762 - 30         |                  |

| COOLING SYSTEM                                              |                                            |                  |
|-------------------------------------------------------------|--------------------------------------------|------------------|
| Engine Cooling Air Flow                                     | m <sup>3</sup> /s - ft <sup>3</sup> /s     | 4.7 - 166.8      |
| Generator Cooling Air Flow                                  | m <sup>3</sup> /min - ft <sup>3</sup> /min | 37.0 - 1307.3    |
| Total Cooling Air Flow<br>(engine + generator + combustion) |                                            |                  |
| Open Skid Version                                           | m <sup>3</sup> /min - ft <sup>3</sup> /min | 658.0 - 23,237.1 |
| Sound Attenuated Version                                    | m <sup>3</sup> /min - ft <sup>3</sup> /min | 855.0 - 30,194.0 |
| Total Cooling Capacity                                      | L - gal                                    | 26.7 - 7.0       |
| Antifreeze Recommended                                      | L - gal                                    | 13.4 - 3.5       |



# Elecon Diesel Generator EDG-100

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| LUBRICATION SYSTEM                 |             |                                 |
|------------------------------------|-------------|---------------------------------|
| Oil Filter Quantity + Type         |             | 1 x Cartridge                   |
| Oil Pan Capacity                   | L - gal     | 15 - 3.96                       |
| Oil Pan Capacity with Filter       | L - gal     | 12 - 3.17                       |
| Oil Cooler                         |             | Water Cooled                    |
| Recommended Oil                    |             | 15W-40 or API CI-4 PLUS or CI-4 |
| Specific Oil Consumption Full Load | % fuel      | <0.1%                           |
| Oil Press                          | (psi) - kPa | 46 - 320                        |

| VENTILATION REQUIREMENTS                                  |                                        |                |
|-----------------------------------------------------------|----------------------------------------|----------------|
| Air Requirement for Combustion (at 100% load/rated speed) | m <sup>3</sup> /h - ft <sup>3</sup> /h | 489.6 - 17,280 |
| Heat Rejected to Ambient                                  |                                        |                |
| From Engine                                               | kW - btu/min                           | 62 - 3544      |
| From Alternator                                           | kW - btu/min                           | 1.8 - 102.44   |

| ELECTRICAL SYSTEMS               |         | 12 V        |
|----------------------------------|---------|-------------|
| Ground (negative/positive)       |         | Negative    |
| Volts (DC)                       | V       | 12          |
| Ampere Rating                    | Amp     | 75          |
| Starter Motor Rated Voltage (DC) | V       | 12          |
| Starter Motor Rated              | kW / HP | 2.03 / 2.76 |
| Min. Cold Cranking Amps          | Amp     | 800         |

| FUEL SYSTEMS              |         |               |
|---------------------------|---------|---------------|
| Recommended Fuel          |         | #2 Diesel     |
| Fuel Supply Line min. ID  | mm - in | 11 - 0.44     |
| Fuel Return Line min. ID  | mm - in | 6 - 0.24      |
| Fuel Pump Type            |         | Engine Driven |
| Secondary Filter          |         | 2 µm          |
| Secondary Water Separator |         | Included      |

| FUEL CONSUMPTION | PRIME Rating |       | STANDBY Rating |       |
|------------------|--------------|-------|----------------|-------|
|                  | L/h          | gal/h | L/h            | gal/h |
| 100% Load        | 28.6         | 7.5   | 31.2           | 8.2   |
| 75% Load         | 22.8         | 6.0   | 24.8           | 6.6   |
| 50% Load         | 16.4         | 4.3   | 17.8           | 4.7   |
| 25% Load         | 8.7          | 2.3   | 9.5            | 2.5   |

### Alternator Specifications

| GENERAL DATA                  |                                           |
|-------------------------------|-------------------------------------------|
| Manufacturer                  | Stamford                                  |
| Model (480 V)                 | UCI 274 D                                 |
| Alternator Type               | 4 poles, rotating field                   |
| Exciter Type                  | Brushless, self-excited<br>PMG (optional) |
| Leads Quantity + Type         | 12, reconnectable                         |
| Stator Pitch                  | 2/3                                       |
| Material                      | Class H                                   |
| Temperature Rise              | 150 °C Standby<br>125 °C Prime            |
| Bearing Quantity + Type       | Single bearing sealed                     |
| Coupling                      | Flexible disc                             |
| STD Regulator                 | SX460                                     |
| PMG Regulator or EBS          | Opt MX341, Opt MX321                      |
| STD Regulator Load Acceptance | +/- 1.5%                                  |
| PMG Regulator Load Acceptance | +/- 1%, +/- 0.5%                          |

#### SOUND ATTENUATED MODEL

| Standard Size<br>(with extended<br>capacity, tank) | Length x Width x Height |                     |      |      |
|----------------------------------------------------|-------------------------|---------------------|------|------|
|                                                    | mm                      | 3300 x 1200 x 2275  |      |      |
|                                                    | in                      | 129.9 x 47.2 x 89.6 |      |      |
| Dry Weight<br>(with standard<br>accessories)       | kg lb                   | 2370 5225           |      |      |
| Fuel Tank<br>Capacity                              | L gal                   | 750 198.0           |      |      |
| Run Time (hr)                                      | 100%                    | 75%                 | 50%  | 25%  |
| Prime Power                                        | 30.5                    | 32.8                | 45.9 | 86.2 |
| Standby Power                                      | 27.9                    | 30.2                | 42.2 | 79.0 |
| Noise Level                                        | 7 m                     | 71 dBA              |      |      |

#### OPEN SKID MODEL

| Overall Size                                 | Length x Width x Height |                   |  |
|----------------------------------------------|-------------------------|-------------------|--|
|                                              | mm                      | 2032 x 813 x 1350 |  |
|                                              | in                      | 80 x 32 x 53      |  |
| Dry Weight<br>(with standard<br>accessories) | kg lb                   | 1048 2310         |  |
| Fuel Tank<br>Capacity                        | Optional                |                   |  |

