

Specification & Application Data

Rating Range – 60Hz Operation

| | | |
|---------|-----|---------|
| Standby | kW | 220-224 |
| | kVA | 213-258 |
| Prime | kW | 190-203 |
| | kVA | 205-234 |

KEY FEATURES

ELECON industrial generators are efficient, Reliable and 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 heavy-duty John Deere 4- cycle Diesel engine certified by the Environmental Protection Agency (EPA) to conform to Tier 3 non-road emission Regulations, an AC high capability alternator regulated by a precise Automatic Voltage Regulator. Heavy- duty Constructed chassis supports the complete set. The generator is protected by a best-in-class sound Attenuated enclosure designed for prime or standby applications.

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

GENSET RATINGS

| GENSET Model | ENGINE Model | ALTERNATOR Model | VOLTAGE N-L L-L | Ph | Hz | 150°C RISE | | | 125°C RISE | | |
|--------------|--------------|------------------|-------------------|----|----|----------------|-----|------|--------------|-----|------|
| | | | | | | STANDBY RATING | | | PRIME RATING | | |
| | | | | | | kW | kVA | Amps | kW | kVA | Amps |
| EDG-220 | | UCDI 274 J | 120/208 | 3 | 60 | 224 | 280 | 778 | 201 | 251 | 697 |
| | | | 120/240 | 3 | 60 | 224 | 280 | 674 | 201 | 249 | 600 |
| | | | 277/480 | 3 | 60 | 224 | 280 | 337 | 201 | 251 | 302 |
| | | UCDI 274 J | 347/600 | 3 | 60 | 224 | 280 | 270 | 201 | 251 | 242 |

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 hour 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 1000ft. (305 m) elevation above 3300ft (1003 m) TEMPERATURE: Derate 0.5% per 10°F (5.5°C) temperature above 77°F (25°C)

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Engine Specification

| GENERAL DATA | | | |
|-------------------------|--------------------------------|-----------------------------|-----|
| Manufacturer | JOHN DEERE | | |
| Engine model | 6090HF484 | | |
| EPA Certification for: | Stage | Tier 3 | |
| Rated | RPM | 1800 | |
| Nominal Power (PRIME) | kW – HP | 232 | 311 |
| Nominal Power (STANDBY) | kW – HP | 258 | 346 |
| Engine type | Diesel 4 stroke | | |
| Injection type | HPCR | | |
| Aspiration type | TURBOCHARGED | | |
| Cylinder arrangement | 6 – L | | |
| Bore and stroke | (mm) – In | (118 x 136.0) 4,661 x 5,354 | |
| Displacement | L – in3 | 9.0 | 549 |
| Cooling system | Liquid (Cool Guard II) | | |
| Governor type | Electronic | | |
| Air cleaner type | Medium duty w/double cartridge | | |
| Compression ratio | 16.0 : 1 | | |

Application data

| EXHAUST SYSTEM | | PRIME | STANDBY |
|---------------------------------|--------------------|--------------|------------------|
| Exhaust manifold type | | Dry | Dry |
| Exhaust outlet diameter | mm – In | 110 – 4.334 | |
| Max. Exhaust temp. at full load | °C | N/A | 634 |
| | °F | N/A | 1173 |
| Exhaust Gas Flow | kg/h – Lb/h | N/A | 1272.6 – 2805.59 |
| | (m3/min) – ft3/min | N/A | (50.5) – 1783 |
| Maximum allowed back pressure | (mm/H2O) – inH2O | 762 – 30 | |

| COOLING SYSTEM | | |
|---|------------------|--------------------|
| Engine cooling air flow | m3/s – ft3/s | 9.9 – 350.2 |
| Generator cooling air flow | m3/min – ft3/min | 37.0 – 1307.3 |
| Total cooling air flow (engine + generator + combustion) | | |
| Open Skid version | m3/min – ft3/min | 1,037.0 – 36,621.3 |
| Sound Attenuated version | m3/min – ft3/min | 1,698.0 – 59,964.3 |
| Total cooling capacity | l – gal | 46.0 – 12.1 |
| Antifreeze recommended | l – gal | 23.0 – 6.1 |

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| LUBRICATION SYSTEM | | |
|------------------------------------|-------------|--------------------------------|
| Oil Filter: quantity. Type | | 1 x Cartridge |
| Oil pan capacity | l – gal | 34 – 8.976 |
| Oil pan capacity with filter | l – gal | 29 – 7.656 |
| Oil cooler | | Water Cooled |
| Recommended oil | | 15W-40 or API CI-4 PLUS o CI-4 |
| Specific oil consumption full load | % fuel | <0.1% <0.1% |
| Oil Press | (psi) – kPa | 38 – 260 |

| VENTILATION REQUIREMENTS | | |
|---|--------------|---------------|
| Air requirement for combustion at 100% load/rated speed | m3/h – ft3/h | 1260 – 44520 |
| Cooling airflow | m3/h – ft3/h | -- |
| Heat rejected to ambient: | | |
| From engine | kW – btu/min | 94.3 – 5368 |
| From alternator | kW – btu/min | 2.78 – 158.21 |

| ELECTRICAL SYSTEMS | | 12V | 24V |
|----------------------------------|---------|-------------|-------------|
| Ground (negative/positive) | | Negative | Negative |
| Volts (DC) | V | 12 | 24 |
| Ampere rating | Amp | 90 | 65 |
| Starter motor rated voltage (DC) | V | 12 | 24 |
| Starter motor rated | kW / HP | 2.03 / 2.76 | 2.03 / 2.76 |
| Battery recommendations | | | |
| Min. Cold Cranking Amps | Amp | 1100 | 1100 |

| FUEL SYSTEMS | | |
|---------------------------|---------|---------------|
| Recommended fuel | | #2 Diesel |
| Fuel supply line. min. ID | mm – in | 11 0.44 |
| Fuel return line. min. ID | mm – in | 10 0.38 |
| Fuel pump Type | | Engine Driven |
| Secondary filter | | 2µm |
| Secondary Water Separator | | Included |

| | | PRIME rating | | STANDBY rating | |
|-----------|-------------|---------------------|--------------|-----------------------|--------------|
| | | l/h | gal/h | l/h | gal/h |
| 100% Load | l/h – gal/h | 58.9 | 15.6 | 61.9 | 16.3 |
| 75% Load | l/h – gal/h | 52.1 | 13.7 | 54.2 | 14.3 |
| 50% Load | l/h – gal/h | 37.9 | 10.0 | 39.4 | 10.4 |
| 25% Load | l/h – gal/h | 18.5 | 4.9 | 19.3 | 5.1 |

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Alternator Specifications

| GENERAL DATA | |
|--|--------------------------------|
| Manufacturer | Stamford |
| Model (480V) | UCDI 274J |
| Alternator Type | 4 poles, rotating field |
| Exciter Type | Brushless, self-excited |
| | PMG (optional) |
| Leads: quantity, type | 12, reconnectable |
| Stator Pitch | 2/3 |
| Insulation system | |
| Material | Class H |
| Temperature rise | 150 °C Standby 125 °C Prime |
| Bearing: quantity, type | Single bearing sealed |
| Coupling | Flexible disc |
| Automatic Voltage regulator | |
| STD regulator | SX460 |
| PMG regulator or EBS | Opt MX341, Opt MX321 |
| Voltage regulation, no load to full load | |
| STD regulator | +/-1.5% |
| PMG regulator load acceptance | +/-1%, +/-0.5% |

SOUND ATTENUATED MODEL

| STANDARD SIZE (Size W/Extended Capacity, Tank) | (Length x Width x Height) | | | |
|--|---------------------------|-----------------------|-------|------|
| | mm | 4,100 x 1,600 x 2,200 | | |
| | in | 161.4 x 63.0 x 86.6 | | |
| Dry weight (with std. accessories) | kg Lb | 3,840 | 8,465 | |
| Fuel Tank Capacity | L Gal | 590 | 155.8 | |
| Run Time (Hr) | 100 % | 75% | 50% | 25% |
| Prime Power | 30.5 | 11.4 | 15.6 | 31.9 |
| Standby Power | 27.9 | 10.9 | 15 | 30.5 |
| Noise level | 7 m | 75 dBa | | |

OPEN SKID MODEL

| Overall size (L x W x H) | (Length x Width x Height) | |
|---------------------------------------|---------------------------|----------------------|
| | mm | 2,794 x 1,219 x 1575 |
| | in | 110 x 48 x 62 |
| Dry weight (with std. accessories) | kg Lb | 2,864 6,310 |
| Fuel Tank Capacity | Optional | |

