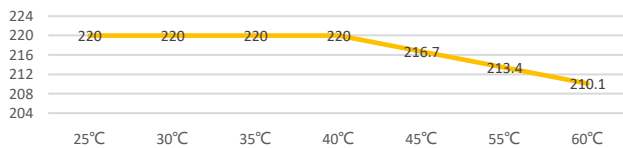




| MODEL           |           | LSC220S3-6 |  |
|-----------------|-----------|------------|--|
| Power<br>Pf.0.8 | Standby   | kVA        | 220  |
|                 |           | kW         | 176  |
|                 | Prime     | kVA        | 200  |
|                 |           | kW         | 160  |
|                 | Frequency | Hz         | 60   |
|                 | Voltage   | V          | 208/120; 220/127;<br>416/240; 440/254; 480/277 |
| Rated speed     | rpm       | 1800       |  |

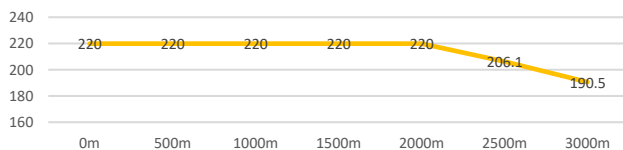
Temperature (Celsius) Derate Curves

Unit: kVA



Altitude (meters) Derate Curves

Unit: kVA



**LEES generator sets meet the standards of ISO9001, CE, BS5000, ISO 8528, ISO 3046, IEC 60034, NEMA MG-1.22.**

### Standard reference Conditions:

Standard reference condition 25°C (77°F) air inlet temp, 100m (328ft) A.S.L 30% relative humidity. Fuel consumption data with diesel fuel with specific gravity of 0.85 and conforming to BS 2869: 1998, Class A2.

**RATINGS:** All three-phase units are rated at 0.8 power factor. **Standby ratings:** Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271. **Prime power ratings:** Prime power ratings apply to installations where utility power is unavailable or unreliable. At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528/1, overload power in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271. For limited running time and base load ratings, consult LEES. Obtain the technical information bulletin (TIS-101) on ratings guidelines for the complete ratings definitions. LEES reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

### Standard Features

- LEES Power provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The 60Hz generator set offers a AUS 2012 listing and CE 2015 listing.
- The generator set complies with ISO 8528-5, Class G3 requirements for transient performance.
- The generator set accepts rated load in one step.
- The 60Hz generator set engine is certified by the Environmental Protection Agency (EU or MEP) to conform to EU2, EU3 nonroad emissions regulations.(≤560KW)
- A one-year limited warranty covers all systems and components. Two-, five-, and ten-year extended warranties are also available.

### Generator Features

- The brushless, rotating-field generator has broadrange reconnectability.
- The pilot-excited, permanent-magnet generator (PMG) provides superior short-circuit capability
- Controllers are available for all applications. See controller features inside.
- The low coolant level shutdown prevents overheating (standard on radiator models only)
- Integral vibration isolation eliminates the need for under-unit vibration spring isolators
- An electronic, isochronous governor delivers precise frequency regulation.
- Electronic engine controls and a generator microprocessor controller combine to deliver one of the most advanced control systems in today's generator market.

## Cummins engine Model: 6CTA8.3-G2



### Main features:

- Accessory drive
- Single Poly Vee belt drive for fan, alternator and water pump, with self-tension idle for minimum maintenance
- Complete rebuild ability
- Cylinder block has multiple rebore capability. Service cylinder sleeves and valve guides are also available
- Compact size
- Easy for installation and ready access for routine maintenance
- Filters
- Fleetguard spin-on fuel filter and full-flow lubricating oil filter
- Cold start capability
- Minimum ambient temperature for unaided cold start -12°C  
Minimum ambient temperature for aided (with coolant heater) cold start -35°C

## Engine Specifications

|                                   |     |  |
|-----------------------------------|-----|--|
| Engine Brand .....                |     | CUMMINS  |
| Engine Model .....                |     | 6CTA8.3-G2   |
| Cylinder No.& Configuration ..... |     | 6 cylinder Diesel L type                                 |
| Working Mode .....                |     | Turbocharged and Aftercooled<br>(Jacket water to cooler) |
| Bore x Stroke .....               | mm  | 114*135  |
| Displacement .....                | L   | 8.3  |
| Compression Ratio .....           |     | 17.3:1   |
| Rated Power .....                 | kW  | 170  |
| Rated Speed .....                 |     | 1800   |
| Lubrication System .....          |     | Splash Lubrication                                       |
| Lube Oil .....                    |     | Conforms above CF class or<br>SAE10W-30,15w-40           |
| Lube Oil Capacity .....           | L   | 27.6   |
| Battery Capacity .....            |     | 120AH*2  |
| Fuel Type .....                   |     | Diesel:0#(Summer),-<br>10#(Winter),-35#(Cold)            |
| Fuel Consumption 25% load .....   | L/H | 14   |
| Fuel Consumption 50% load .....   | L/H | 23   |
| Fuel Consumption 75% load .....   | L/H | 33   |
| Fuel Consumption 100% load .....  | L/H | 44   |

### Alternator

|   |  |
|---|--|
| Type  | 4-Pole, Rotating-Field                     |
| Exciter type  | Brushless, Permanent-Magnet, Pilot Exciter |
| Voltage regulator   | Solid-State, Volts/Hz                      |
| Insulation  | NEMA MG1, Class H                          |
| Material  | Synthetic, Nonhygroscopic                  |
| Temperature rise  | 130°C, 150°C Standby                       |
| Bearing: quantity, type   | 1, Sealed                                  |
| Coupling  | Flexible Disc                              |
| Amortisseur windings  | Full                                       |
| Rotor balancing   | 125% 60 Hz, 150% 50 Hz                     |
| Voltage regulation, no-load to full-load(with < 0.5% drift due to temp. variation | 3-Phase Sensing, $\pm 0.25\%$              |
| One-step load acceptance  | 100% of Rating                             |
| Unbalanced load capability  | 100% of Rated Standby                      |

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the generator field.
- Self-ventilated and dripproof construction.
- Superior voltage waveform from two-thirds pitch windings and skewed stator.
- Digital solid-state volts-per-hertz voltage regulator with  $\pm 0.25\%$  no-load to full-load regulation.
- Brushless alternator with brushless pilot exciter for excellent load response.

### Controller



Audiovisual annunciation with NFPA 110 Level 1 capability. Programmable microprocessor logic and digital display features. Safeguard circuit protection standard. 12- or 24-volt engine electrical system capability. Remote start, remote annunciation, and remote communication options. Refer to M6-46 for additional controller features and accessories

#### Key Features

- 4-line back-lit LCD text display
- Five key menu navigation
- Front panel editing with PIN protection
- LED and LCD alarm indication
- Customisable status screens
- Power save mode
- Support for up to three remote display units
- 9 configurable inputs
- 8 configurable outputs
- Flexible sender inputs
- Configurable timers and alarms
- 3 configurable maintenance alarms
- Multiple date and time scheduler
- Configurable event log (250)
- Control logic facilities
- Easy access diagnostic page
- CAN and Magnetic Pick-up / Alt. Sensing
- Fuel usage monitor and low fuel alarms
- Charger alternator failure alarm
- Manual speed control
- Manual fuel pump control
- Engine exerciser
- "protections disabled" feature
- kW overload protection
- Power monitoring
- Load switching (load shedding and dummy load outputs)
- Automatic load transfer
- Unbalanced load protection
- Independent Earth Fault trip
- USB connectivity
- Backed up real time clock
- Configurable display languages
- User selectable RS232 and RS485 communications
- SMS Messaging (additional external modem required)
- Additional display screens to help with modem diagnostics
- Integral PLC editor

## Generating Sets Standard and Optional Features

### Engine

- 4-stroke, water-cooled diesel engine
- Standard air filter
- Standard fuel filter
- Standard oil filter
- Oil temperature sensor
- Low coolant level sensor
- Radiator with blowing fan
- Industrial silence
- Fuel water separator
- Water jacket heater (optional)

### Alternator

- Class H insulation
- IP23 Protection
- Automatic Voltage Regulator (AVR)
- PMG excitation
- Single bearing alternator
- Class F or class B temperature rise (optional)
- Digital Voltage Regulator (optional)
- Double bearing (optional)
- Condensed heater (optional)
- IP41 Protection (optional)

### Electrical system

- Maintenance-free and anti-explosion battery
- Standard breaker
- ABB breaker (optional)
- ATS (optional)
- Battery charger (optional)
- GMS monitoring (optional)

### Packing

- Engine manual
- Alternator manual
- Gensets operation and maintenance manual
- Tool kit

### Baseframe

- Forklift pockets
- Pulling slots
- Earth wire protection
- Built-in anti vibration mountings
- Fuel outlet valve
- Standard fuel tank
- Enlarged fuel tank (optional)
- Separated fuel tank (optional)

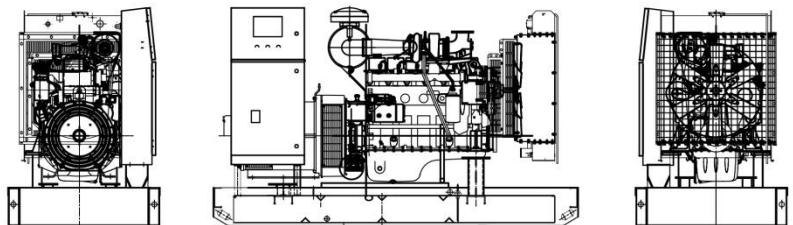
### Canopy

- Weatherproof & sound-attenuated canopy
- Sound-absorbing material
- Lifting lug
- Emergency stop button
- Inside silencer

### Overview Dimension & Weight



| LSC220S3-6 (Silent type) |                |               |                |             |                        |
|--------------------------|----------------|---------------|----------------|-------------|------------------------|
| Configuration            | L= Length (mm) | W= Width (mm) | H= Height (mm) | Weight (kg) | Fuel Tank Capacity (L) |
| Silent Type              | 3360           | 1110          | 1700           | 2280        | 393                    |



| LSC220E3-6 (Open type) |                |               |                |             |                        |
|------------------------|----------------|---------------|----------------|-------------|------------------------|
| Configuration          | L= Length (mm) | W= Width (mm) | H= Height (mm) | Weight (kg) | Fuel Tank Capacity (L) |
| Open Type              | 2480           | 890           | 1580           | 1780        | 393                    |

Contact your distributor / dealer for more information

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