

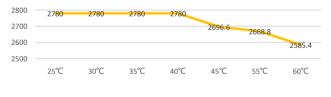
## Comprehensive Power Solutions 8-4000kVA





| MODEL           |             |     | LSM2780S3 |  |  |
|-----------------|-------------|-----|-----------|--|--|
| Power<br>Pf.0.8 | Standby     | kVA | 2780      |  |  |
|                 |             | kW  | 2224      |  |  |
|                 | Prime       | kVA | 2500      |  |  |
|                 |             | kW  | 2000      |  |  |
|                 | Frequency   | Hz  | 50        |  |  |
|                 | Voltage     | V   | 230/400   |  |  |
|                 | Rated speed | rpm | 1500      |  |  |

### 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  $25^{\circ}$ 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.

#### **Standard Features**

>LEES Power provides one-source responsibility for the generating system and accessories.

The generator set and its components are prototype-tested, factorybuilt, and production-tested.

➤The 50Hz 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 50Hz 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.

**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.

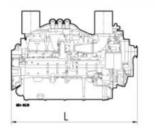


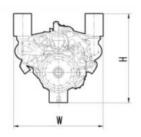
# Comprehensive Power Solutions 8-4000kVA

# MTU engine Model: 20V4000G23



| Engine Brand                |     | MTU                         |
|-----------------------------|-----|-----------------------------|
| Engine Model                |     | 20V4000G23                  |
| Cylinder No.& Configuration |     | 20 cylinder Diesel.VEE type |
| Working Mode                |     | Turbocharged and            |
|                             |     | air-cooled charge air       |
| Bore x Stroke               | mm  | 170*210                     |
| Displacement                | L   | 95.4                        |
| Compression Ratio           |     | 16.4: 1                     |
| Rated Power                 | kW  | 2200                        |
| Rated Speed                 |     | 1500                        |
| Lubrication System          |     | Splash Lubrication          |
| Lube Oil                    |     | CH15W-40                    |
| Lube Oil Capacity           | L   | 390                         |
| Battery Capacity            |     | 200AH*4                     |
| Fuel Type                   |     | 0#                          |
| Fuel Consumption 25% load   | L/H | 167.64                      |
| Fuel Consumption 50% load   | L/H | 294.77                      |
| Fuel Consumption 75% load   | L/H | 408.62                      |
| Fuel Consumption 100% load  | L/H | 536.45                      |







### Alternator

Type Exciter type

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

100% of Rating 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±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 (optional)
- > 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

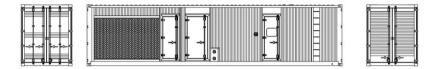
#### **Baseframe**

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

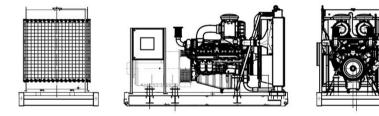
### Canopy

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

### **Overview Dimension & Weight**



| LSM2780S3 (Containerized type) |                |               |                |             |                           |
|--------------------------------|----------------|---------------|----------------|-------------|---------------------------|
| Configuration                  | L= Length (mm) | W= Width (mm) | H= Height (mm) | Weight (kg) | Fuel Tank<br>Capacity (L) |
| Containerized<br>Type          |                | ISO 40'ft HQ  |                | 26000       | 4292                      |



| LSM2780E3 (Open type) |                |               |                |             |                           |  |  |
|-----------------------|----------------|---------------|----------------|-------------|---------------------------|--|--|
| Configuration         | L= Length (mm) | W= Width (mm) | H= Height (mm) | Weight (kg) | Fuel Tank<br>Capacity (L) |  |  |
| Open Type             | 6000           | 2700          | 3400           | 18500       | -                         |  |  |

Contact your distributor / dealer for more information

#### WUXI LEES POWER COMPANY LIMITED

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