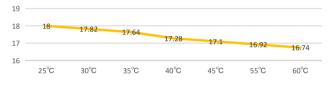
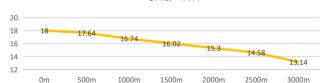




## Temperature (Celsius) Derate Curves Unit: kVA



#### 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 ( $77^{\circ}$ 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.

	MODEL	LSY18S		
	Standby	kVA	18.4	
		kW	18.4	
	Prime	kVA	16.8	
Power Pf.1.0		kW	16.8	
F1.1.0	Frequency	Hz	50	
	Voltage	V	230	
	Rated speed	rpm	1500	

#### **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 single-phase units are rated at 1.0 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.



# LEES engine Model: YND490D

Main features:

- · Four-cylinder, water-cooled, in-line diesel engine
- · Efficient fuel system for max power output and durability
- · Large-capacity air cleaner
- · Cost effective, fuel efficient and reliable performance
- · Functional engine with compact structure
- · Excellent after-sales service and sufficient spare parts supplying
- · Easy installation and ready access for routine maintenance

# **Engine Specifications**

Engine Brand		LEES
Engine Model		YND490D
Cylinder No.& Configuration		4 cylinder Diesel L type
Working Mode		Naturally Aspirated
Bore x Stroke m	nm	90x100
Displacement L		2.54
Compression Ratio		18
Rated Power kl	W	21
Rated Speed		1500
Lubrication System		Splash Lubrication
Lube Oil		Conforms above CD class or
		SAE10W-30,15W-40
Lube Oil Capacity		8
Battery Capacity		6-QW-45(380)*1
Fuel Type		Diesel:0#(Summer),-
		10#(Winter),-35#(Cold)
Fuel Consumption 25% load	/H	1.87
Fuel Consumption 50% loadL/	/H	2.98
Fuel Consumption 75% load L/	/H	4.05
Fuel Consumption 100% load	/H	5.45





# Alternator

Туре	
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 3-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 Single-Phase Sensing,  $\pm 1\%$ 

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±1% no-load to full-load regulation.
- Brushless alternator with brushless pilot exciter for excellent load response.

# Controller



#### **Key Features**

- Using microprocessor as a core, graphics LCD with big screen and backlight, key touch for operation
- > Have a RS485 port, can be used for communicate to PC
- > All parameters can be set from the front panel, or be set by PC used SG72
- > Security password-protected programming levels
- > All parameters use digital modulation, with higher reliability and stability
- Built-in speed/frequency detecting units can accurately judge the states such as crank success and over speed
- Power supply range is wide, accommodating to different starting battery voltage environment
- Built-in watch dog can never be dead halt, ensuring smooth program execution
- Modular configuration design, inserted type connection terminals, flush type installation, compact structure, easy installation

# Precision measure and display of

- > Mains voltage
- Mains frequency
- Mains current
- Generator voltage
- Generator current
- Generator frequency
- Generator active power (kW)
- Generator inactive power (kW)
- Generator apparent power (kVA)

- Generator power factor
- Generator starts count
- Generator hour count
- Cumulate electric energy (kWh)
- Generator temperature
- Generator pressure
- Generator fuel level
- Start battery voltage

Generator over currentFail to start

> High engine temperature

Low oil pressure

Loss of speed signal

Generator over frequency

Generator over voltage

Generator under voltage

Generator under frequency

> Over speed

Under speed

Fail to start

**Protection** 

 $\geq$ 

 $\geq$ 

Auxiliary inputs



# **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 (optional)
- 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

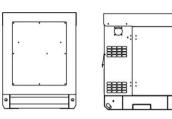
- Weatherproof & sound-attenated canopy
- Sound-absorbing material
- Lifting lug
- Emergency stop button
- Inside silencer

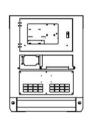
Contact your distributor / dealer for more information

#### WUXI LEES POWER COMPANY LIMITED

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LSY18S (Silent type)									
Configuration	L= Length (mm)	W= Width (mm)	H= Height (mm)	Weight (kg)	Fuel Tank Capacity (L)				
Silent Type	1846	806	1146	720	79				

**Overview Dimension & Weight**