

Diesel Generating Sets

50
Hz

Model: **SM2000**

INDUSTRIAL RANGE

Powered by MTU



Generating Rates

POWER RATING		PRIME	STANDBY
POWER	kVA	1812	2000
	kW	1450	1600
Rated Speed	r.p.m	1500	
Standard Voltage	V	400	
Available Voltages	V	400/230 - 230/132 - 230 V	
Rated at power factor	Cos Phi	0.8	

Ambient conditions of reference: 1000 mbar, 25°C, 30% relative humidity. Power according to ISO 3046 normative.

P.R.P. Prime Power - ISO 8528 : prime power is the maximum power available during a variable power sequence, which may be run for an unlimited number of hours per year, between stated maintenance intervals. The permissible average power output during a 24 hours period shall not exceed 80% of the prime power. 10% overload available for governing purposes only.

Standby Power (ISO 3046 Fuel Stop power): power available for use at variable loads for limited annual time (500h), within the following limits of maximum operating time: 100% load 25h per year – 90% load 200h per year. No overload available. Applicable in case of failure of the main in areas of reliable electrical network.



WWW.SUNSHINEGENERATOR.COM

Diesel Generating Sets



Model: SM2000

INDUSTRIAL RANGE

Powered by MTU



Engine Specifications 1500 r.p.m.

ENGINE		CONTINUOUS		STANDBY	
Rated Output	kW	1575		1733	
Manufacturer		MTU			
Model		12V4000G63			
No. of Cylinders and Build		4 Cycle,12V Cylinder Diesel			
Aspiration and Cooling		turbocharger			
Bore/Stroke	mm	170X210			
Compress the ratio		16.5:1			
Cooling system		Water-cooled			
Engine Speed/Frequency	rpm/Hz	1500/50HZ			
Coolant Capacity	L	200			
Starting System		Electric 24 volt DC			
Displacement	L	57.2			
Lubricant system Capacity	L	260			
Battery Volatge / Capacity		24VDC			
Governing Type	Type	Electronic engine management system "ADEC"			
Air Filter	Type	Dry			
Fuel Consumption	Load	100%	75%	50%	25%
	L/h	358.0	270.0	186.0	228.0

ENGINE--Industrial 4 stroke cooled diesel engine complete with air,fuel and oil filters,electric starting and charging equipment,engine protection against low water level.

COOLING--Radiator and colling fan complete with protection guards,designed to cool engine at specified output in air temperatures upto 45 °C,radiators suitable for higher temperatures are available.Low water level protection fitted as standard.

ELECTRICAL SYSTEM--24V upto.Axial type starter motor,battery charging alternator,high capacity lead acid battery,and battery tray mounted on the generator base frame,and heavy duty interconnecting cable with terminations.

EXHAUST SYSTEM--Heavy duty industrial exhaust silencer with flexible piping.



WWW.SUNSHINEGENERATOR.COM

Diesel Generating Sets

50 Hz

Model: SM2000

INDUSTRIAL RANGE

Powered by MTU



Alternator Technical Specifications

ALTERNATOR BRAND		LEROY SOMER	STAMFORD
Model		LSA51.2S55	PI734E
Exciter System		Self-excited, brushless	
Poles	Num	4	
Cooling Fan		Cast alloy aluminum	
Bearing		Single,double shielded	
Windings		100% copper	
Connection Type		Reconnectable	
Insulation Type	Class	Class H	
Pitch		2/3	
Amortisseur Winding		Full	
Voltage Regulator		A.V.R. (Electronic)	
Steady Voltage Precision		± 1%	
Underspeed Protection		Standard	
Overexcitation Protection		IP23	
TIF (1960 Weightings)		<50	

ALTERNATOR--Brushless,self exciting,self regulation,sreen protected,drip proof rated in accordance with IEC60034.Voltage regulation maintained within ±0.5% from no load to full load.between 0.8 lagging and unity.All standard voltages available.

Diesel Generating Sets

50
Hz

Model: **SM2000**

INDUSTRIAL RANGE

Powered by MTU

Control Panel Technical Specifications

Control Panel- ComAp AMF20

The base mounted control panel in a vibration isolated sheet steel enclosure. The control panel is equipped as follows:

- a) Instruments: Analogue Voltmeter, Hours Run Meter, Water pressure Meter.
- b) Controls: Emergency Stop Pushbutton, Voltmeter Phase Selector Switch.
- c) Control module: Standard collocation is ComAp AMF20 Auto start with AMF.



Main Features:

- Δ Automatic mains failure
- Δ Engine control, Generator protection
- Δ Built in alarms and warnings
- Δ Remote Start operation available
- Δ Daily / weekly / monthly exerciser
- Δ Weekly operation schedule programs
- Δ Fuel pump control
- Δ ECU control and monitoring via J1940 CANBUS
- Δ Mains simulation
- Δ Block heater control
- Δ Field adjustable parameters
- Δ Free MS-Windows Remote monitoring
- Δ LED displays
- Δ Configurable analogue inputs
- Δ I/O expansion capability



Protection Circuits

- WARNING
- Battery charge failure
- Low battery voltage
- SHUT DOWNS
- Fail to start
- Emergency stop
- Low oil pressure
- High engine temperature
- Over /Under speed
- Under/over generator frequency
- Failed to reach loading voltage
- ELECTRICAL TRIP
- Generator over current

Instruments

- ENGINE
- Engine speed
- Oil pressure
- Coolant temperature
- Run time
- Battery volts
- TOR
- Voltage (L-N)
- Current (L1-L2-L3)
- Frequency
- MAINS
- Voltage (L-L, L-N)



WWW.SUNSHINEGENERATOR.COM

Diesel Generating Sets

50
Hz

Model: **SM2000**

INDUSTRIAL RANGE

Powered by MTU

Generating Sets Standard Features

Three phase four wire, output voltage 400V/230V, 50HZ, between 0.8 lagging, protection capability according with the standard of NAME1 and IP23.

General Features:

- Δ Composed of MTU diesel engine and Stamford or Leroy somer alternator
- Δ Oil and fuel filter fitted, water separator
- Δ Lube-oil drain valve fitted
- Δ Electric Starter Charge motor 24 VD.C
- Δ Water-cooled
- Δ 8-hours operation base tank
- Δ Auto start
- Δ Optional soundproof and weatherproof canopy
- Δ 3 pole MCCB Delixi breaker
- Δ Operation & Maintenance manual
- Δ Special Integrated Steel Base tank and sprayed overall in gloss enamel paint

Voltage Regulation:

- Voltage regulation maintained within $\pm 0.5\%$
- Between 0.8 and 1.0 lagging and unity
- From no load to full load
- At speed droop variation upto 4.5%

Frequency Adjustable Ratio:

Change load from 0-100%, within 1.0% (electric speed regulator), within 4.5% (mechanical speed regulator)

Frequency Undulation:

- load from 0-100%, frequency undulation within 0.25%
- No load wire volts max undulation ration\ within 1.8%
- Three Phrase balanced load in the order of 5%
- Effect factor of Telecom
- TIF better than 50
- THF to IEC60034 Part 40 better than 2%



WWW.SUNSHINEGENERATOR.COM

Diesel Generating Sets

50
Hz

Model: **SM2000**

INDUSTRIAL RANGE

Powered by MTU

Soundproofed Version Features

Robust Corrosion Resistant Construction

- Δ Black finish stainless steel lock and hinges
- Δ Body made from steel components treated with polyester powder coating

Excellent Access for Maintenance

- Δ Two large doors on each side
- Δ Radiator fill access plate
- Δ Lube oil and cooling water drains pipes to exterior of the enclosure

Security and Safety

- Δ Control panel viewing window in a lockable access door
- Δ Emergency stop push button (red) mounted on enclosure interior
- Δ Cooling fan and battery charging alternator fully guarded
- Δ Exhaust silencing system totally enclosed for operator safety





WWW.SUNSHINEGENERATOR.COM

Diesel Generating Sets

50
Hz

Model: **SM2000**

INDUSTRIAL RANGE

Powered by MTU

Generating Sets other Features

Generating Sets Optional Features

- ΔLow fuel level alarm shutdown
- ΔAutomatic Fuel Filling System
- ΔEngine oil feeding and drain pump
- ΔAuto Transfer Switch(ATS)
- ΔParallel control panels
- ΔCircuit Breaker MCCB & ACB
- ΔRemote Control Panel
- Δweatherproof/soundproof Canopy
- ΔTrailer type Gensets

Quality Standards

ISO9001:2000,ISO14000,ISO3046
ISO8528 BS4999
BS5514,AS1359,ICE34
CE Compliance

Gensets Dimensions & Weight

Open type:LxWxH (mm) Net Weight Kgs

5350*2100*2600/14000

Silent type:LxWxH (mm) Net Weight Kgs

40' Standard Container /20500



FUZHOU SUNSHINE MACHINERY CO.,LIMITED
Fuzhou, Fujian, China.

Tel:86-591-88204179 FAX:86-591-87723357

Email: sales@sunshinemach.com www.sunshinegenerator.com



WWW.SUNSHINEGENERATOR.COM

SUNSHINE reserves the right to modify the characteristics of its product at any time in order to incorporate the latest technological developments. The information contained in this document may therefore be changed without notice.