



## X2750K

## DIESEL GENSET

MODEL	X2750K
Stand-by Power @ 50Hz	2200kW / 2750 kVA
Prime Power @ 50Hz	2000 kW / 2500 kVA

### Standard Features

#### General features :

- Engine (MTU , 20V4000G22E )
- Charge alternator 24 V , Governor: Elec
- Alternator (LEROY SOMER , LSA53S75 )
- Single bearing alternator IP 23 , insulation class H /H
- Radiator N/A°C max. T° air inlet with coolant cap
- Skid and vibration isolators
- Dry type air filter
- Main line circuit breaker
- Microprocessor control panel
- User manual



### Generator Ratings

Voltage	HZ	Phase	P.F	Standby Amps	Standby Ratings kW/kVA	Prime Ratings kW/kVA
415/240	50	3	0.8	3826	2200 / 2750	2000 / 2500
400/230	50	3	0.8	3969	2200 / 2750	2000 / 2500
380/220	50	3	0.8	4178	2200 / 2750	2000 / 2500

**PRP** : Prime Power is available for an unlimited number of annual operating hours in variable load applications, in accordance with ISO 8528-1. A 10% overload capability is available for a period of 1 hour within 12-hour period of operation, in accordance with ISO 3046-1

**ESP** : The standby power rating is applicable for supplying emergency power in variable load applications in accordance with ISO 8528-1. Overload is not allowed.

### Conditions of sale

- SDMO provides a full line of products with high quality recognized engines and alternators.
- Service and parts are available from SDMO distributors as a single source of responsibility.
- Electronic governor MDEC is available on all models from the XS range.
- Each and every units is factory tested. All generator sets are also prototype tested.
- Warranty according to our standard conditions. Five years extended also available



## ENGINE DATA

Manufacturer / Model	MTU 20V4000G22E , 4-cycle, Turbo , Air/Water DC
Cylinder Arrangement	20 X V
Displacement	89.81L [5480.5C.I.]
Bore and Stroke	165mm [6.5in.] X 210mm [8.3in.]
Compression ratio	15.5 : 1
Rated RPM	1500 Rpm
Piston Speed	10.5m/s [34.4ft./s]
Max. stand by Power at rated RPM*	2420kW [3243BHP]*
Frequency regulation, steady state	+/-0. 5%
BMEP	19.66bar [285psi]
Governor : type	Elec

### Exhaust System

Exhaust gas flow	9000L/s [19072cfm]
Exhaust temperature	525°C [977°F]
Max back pressure	300mm CE [12in. WG]

### Fuel System

110% (Stand By power )	629L/h [166.2gal/hr]
100% (of the Prime Power)	580L/h [153.2gal/hr]
75% (of the Prime Power)	443L/h [117.0gal/hr]
50% (of the Prime Power)	286L/h [75.6gal/hr]
Total fuel flow	1500L/h [396.3gal/hr]

### Oil System

Total oil capacity w/filters	390L [103.0gal]
Oil Pressure low idle	4.8bar [69.6psi]
Oil Pressure rated RPM	6bar [86.9psi]
Oil consumption 100% load	1.74L/h [0.5gal/hr]
Oil capacity carter	340L [89.8gal]

### Thermal balance 100% load

Heat rejection to exhaust	N/A
Radiated heat to ambient	105kW [5970Btu/mn]
Heat rejection to coolant	N/A

### Air intake

Max. intake restriction	150mm CE [6in. WG]
Engine air flow	3500L/s [7417cfm]

### Coolant System

Radiator & engine capacity	N/A
Max water temperature	97°C [207°F]
Outlet water temperature	93°C [199°F]
Fan power	N/A
Fan air flow	N/A
Available restriction on air flow	N/A
Type of coolant	Coolelf mdx
Thermostat	79/-- °C

### Emissions

HC	N/A
CO	N/A
Nox	N/A
PM	N/A

\* For the 2000 series engines, the powers expressed are the net engine powers (cooling system as standard)  
For the 4000 series engines, the powers expressed are the gross engine powers (cooling system optional, compact version)



## ALTERNATOR SPECIFICATIONS

### GENERAL DATA

- Compliance with NEMA MG21, UTE NF C51.111, VDE 0530, BS 4999, CSA standards.
- Vacuum-impregnated windings with epoxy varnish.
- IP21 drip proof.

### ALTERNATOR DATA

Manufacturer / Type	LERROY SOMER LSA53S75
Number of phase	3
Power factor (Cos Phi)	0.8
Altitude	1000
Overspeed	2160 rpm
Pole : number	4
Exciter type	AREP
Insulation : class, temperature rise	H / H
Voltage regulator	R449
Sustained short circuit current	300% - 10sec.
Total harmonics (TGH/THC)	< 2,5%
Wave form : NEMA = TIF – TGH/THC	< 50
Wave form : CEI = FHT – TGH/THC	< 2%
Bearing : number	1
Coupling	Direct
Voltage regulation 0 to 100% load	+/- 0,5%
Recovery time (20% Volt dip) ms	800 ms
SkVA with 90 % of nominal sustained voltage (at 0.4 PF)	N/A

### OTHER ALTERNATOR DATA

Continuous nominal rating @ 40°C	3293 kVA
Standby rating @ 27°C	3622 kVA
Efficiencies @ 4/4 load	96.1 %
Air flow	3.5m <sup>3</sup> /s [7416.05cfm]
Short circuit ratio;50 (Kcc)	0.45
Direct axis synchro reactance unsaturated (Xd)	284 %
Quadra axis synchro reactance unsaturated (Xq)	171 %
Open circuit time constant;50 (T'do)	2880 ms
Direct axis transient reactance saturated (X'd)	23 %
Short circuit transient time constant (T'd)	272 ms
Direct axis subtransient reactance saturated (X''d)	12.5 %
Subtransient time constant (T''d)	25 ms
Quadra axis subtransient reactance saturated (X''q)	15.6 %
Zero sequence reactance unsaturated (Xo)	2.9 %
Negative sequence reactance saturated (X2)	14 %
Armature time constant (Ta)	58 ms
No load excitation current (io)	1.3 A
Full load excitation current (ic)	4.9 A
Full load excitation voltage (uc)	54 V
Recovery time (Delta U = 20% transitoire)	800 ms
Motor start (Delta = 20% perm. Or 50% trans.)	6700 kVA
Transient dip (4/4 charge) – PF : 1.8 AR	12 %
No load losses	41.6 kW
Heat rejection	107 kW

**Control Panels**

**TELYS**



Specifications :

- Frequency meter, Ammeter, Voltmeter
- Alarms and faults Oil pressure, water temperature, No start-up, Overspeed, Min/max alternator, Min/max battery voltage, Low fuel level, Emergency stop
- Engine parameters Hours counter, Oil pressure, Water temperature, Engine speed, Battery voltage, Fuel level

**KERYS**



Specifications :

- Frequency meter, Ammeter, Voltmeter
- Alarms and faults Oil pressure, water temperature, No start-up, Overspeed, Min/max alternator, Min/max battery voltage, Low fuel level, Emergency stop
- Engine parameters Hours counter, Oil pressure, Water temperature, Engine speed, Battery voltage, Fuel level
- Additional specifications Website, Troubleshooting, Assistance and Maintenance, Plotting and logging, Load impact, 8 configurations available, Compliance with international standards...

**M80**



Specifications :

- Tachometer, Emergency stop button, client connection terminal strip, EC certified
- Engine parameters :
- Hours counter, Oil pressure gauge, Water temperature indicator, Oil pressure indicator

## Options

### Engine and Radiator

- Heat shield protection
- Oil drain extension
- Heavy duty air filter
- Lube oil drain pump
- Radiator core guard
- Battery charger
- Block heater

### Alternator

- Anti condensation heater
- Enforced impregnation
- Oversized alternator

### Control panel

- NFPA 110 level 1
- Paralleling system
- Remote annunciator
- Oil temperature shutdown

### Exhaust

- Residential silencer
- Critical silencer
- Flexible exhaust conn.

- Key start panel

### Literature

- Parts
- Maintenance

### Fuel

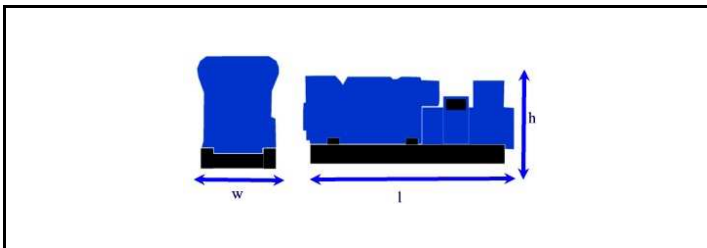
- Day tank
- Subbase fuel tanks UL
- Water separator fuel filter

### Contenergy

- N/A
- Silent N/A db @ 7m [23 Ft] (stby)

## Weight and Dimensions

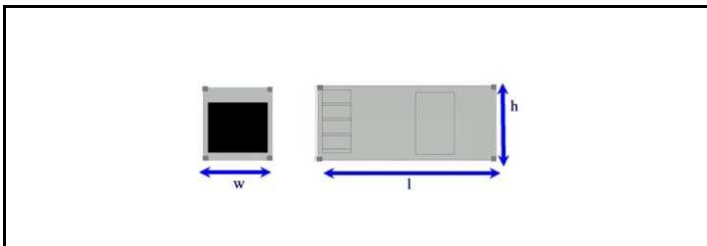
### Open Model Excluding option



Overall size l x w x h :  
5302mm [209in] x 2250mm [89in] x 2454mm [97in]

Weight :  
17290kg [38107lbs] Net 17901kg [39454lbs] Brut

### With Optional Enclosure



Overall size l x w x h :  
N/A x N/A x N/A

Weight :  
N/A Net N/A Brut

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