

# X1100K

Engine MTU , 18V2000G63E  
Alternator LEROY SOMER , LSA50.1S4

## STANDARD FEATURES

- Electronic governor
- Mechanically welded chassis with antivibration suspension
- Radiator for wiring T° of 40°C [104°F] max with mechanical fan
- Exhaust outlet with flexible and flanges
- 24 V charging alternator and starter
- Supplied with oil and coolant -30°C
- User manual and commissioning guide



Voltage	Power ESP kWe/kVA	Power PRP kWe/kVA	Standby Amps	Dimensions	Weight
415/240	880 / 1100	800 / 1000	1530	Length: 4570mm [180in]	7160kg [15785 lbs] Net
400/230	880 / 1100	800 / 1000	1588	Width: 1770mm [70in]	7585kg [16722 lbs] Gross
380/220	880 / 1100	800 / 1000	1671	Height: 2200mm [87in]	




## POWER DEFINITION

**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.

## TERM OF USE

Standard reference conditions 40 °C Air Inlet Temp, 400 m A.S.L. 60 % relative humidity. All engine performance data based on the above mentioned maximum continuous ratings.

Type	dB(A)@1m	dB(A)@7m	Dimensions	Weight	Tank
 ISO20	87	77	Length: 6058mm [239in] Width: 2438mm [96in] Height: 2896mm [114in]	12133kg [26749lbs] Net 12998kg [28656lbs] Gross	500 L
 CIR20SSi-R	80	70	Length: 6058mm [239in] Width: 2438mm [96in] Height: 2896mm [114in]	14478kg [31919lbs] Net 16699kg [36815lbs] Gross	2000 L
 CIR20SSi	80	70	Length: 6058mm [239in] Width: 2438mm [96in] Height: 2896mm [114in]	14512kg [31993lbs] Net 15081kg [33248lbs] Gross	500 L





## ENGINE SPECIFICATIONS

STANDARD FEATURES	Manufacturer / Model	MTU 18V2000G63E , 4-strokes, Turbo , Air/Air DC 18 X
	Cylinder Arrangement	V
	Displacement	35.8L [2184.6C.l.]
	Bore and Stroke	130mm [5.1in.] X 150mm [5.9in.]
	Compression ratio	16 : 1
	Rated RPM	1500 Rpm
	Piston Speed	7.5m/s [24.6ft./s]
	Max. stand by Power at rated RPM	938kW [1257BHP]
	Frequency regulation, steady state	+/- 0.5%
	BMEP	20bar [290psi]
	Governor : type	ELEC
EXHAUST SYSTEM	Exhaust temperature	580°C [1076°F]
	Exhaust gas flow	3600L/s [7629cfm]
	Max back pressure	500mm CE [20in. WG]
FUEL SYSTEM	110% (Stand By power )	246L/h [65.0gal/hr]
	100% (of the Prime Power)	224L/h [59.2gal/hr]
	75% (of the Prime Power)	165L/h [43.6gal/hr]
	50% (of the Prime Power)	111L/h [29.3gal/hr]
	Max. fuel pump flow	450L/h [118.9gal/hr]
OIL SYSTEM	Total oil capacity w/filters	130L [34.3gal]
	Oil Pressure low idle	4.5bar [65.2psi]
	Oil Pressure rated RPM	7.2bar [104.3psi]
	Oil consumption 100% load	1.12L/h [0.296gal/hr]
	Oil capacity carter	[N/A]
THERMAL BALANCE	Heat rejection to exhaust	829kW [47137Btu/mn]
	Radiated heat to ambient	55kW [3127Btu/mn]
	Heat rejection to coolant	340kW [19332Btu/mn]
AIR INTAKE	Max. intake restriction	150mm CE [6in. WG]
	Engine air flow	1300L/s [2755cfm]
COOLANT SYSTEM	Radiator & engine capacity	302L [79.8gal]
	Max water temperature	97°C [207°F]
	Outlet water temperature	93°C [199°F]
	Fan power	45 kW
	Fan air flow w/o restriction	23.2m3/s [49163cfm]
	Available restriction on air flow	20mm CE [0.8in. WG]
	Type of coolant	Coolelf mdx
	Thermostat	75-x °C
EMISSIONS LEVEL	PM	N/A
	CO	N/A
	Nox	N/A
	HC	N/A

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## ALTERNATOR SPECIFICATIONS

GENERAL  DATAS	Manufacturer	LEROY SOMER
	Type	LSA50.1S4
	Number of phase	3
	Power factor (Cos Phi)	0.8
	Altitude	< 1000 m
	Overspeed	2250 rpm
	Pole : number	4
	Exciter type	AREP
	Insulation : class, temperature rise	H / H
	Voltage regulator	R449
	Total harmonics (TGH/THC)	< 4%
	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	+/- 1%	
Recovery time (20% Volt dip) ms	< 500 ms	
SKVA with 90% of nominal sustained voltage (at 0.4PF)	N/A	
OTHER  DATAS	Continuous nominal rating @ 40°C	1025 kVA
	Standby rating @ 27°C	1130 kVA
	Efficiencies @ 4/4 load	94.5 %
	Air flow	1.6m3/s [3390.19cfm]
	Short circuit ratio;50 (Kcc)	0.34
	Direct axis synchro reactance unsaturated (Xd)	381 %
	Quadra axis synchro reactance unsaturated (Xq)	229 %
	Open circuit time constant;50 (T'do)	2350 ms
	Direct axis transient reactance saturated (X'd)	28.2 %
	Short circuit transient time constant (T'd)	205 ms
	Direct axis subtransient reactance saturated (X''d)	15.5 %
	Subtransient time constant (T''d)	17 ms
	Quadra axis subtransient reactance saturated (X''q)	19.5 %
	Zero sequence reactance unsaturated (Xo)	3.7 %
	Negative sequence reactance saturated (X2)	17.5 %
	Armature time constant (Ta)	36 ms
	No load excitation current (io)	1.05 A
	Full load excitation current (ic)	4.85 A
	Full load excitation voltage (uc)	61 V
	Recovery time (Delta U = 20% transitoire)	< 500 ms
	Motor start (Delta = 20% perm. Or 50% trans.)	2000 kVA
	Transient dip (4/4 charge) – PF : 1.8 AR	14 %
No load losses	12.7kW [12.70Kw]	
Heat rejection	47.7 kW	



## CONTROL PANEL

### Option

### 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

### Option

### 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

### Option

### 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...

