

X1000K

Engine MTU , 16V2000G63E
 Alternator LEROY SOMER , LSA491L10

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	801 / 1001	728 / 910	1393	Length: 4370mm [172in]	6177kg [13618 lbs] Net
400/230	801 / 1001	728 / 910	1445	Width: 1770mm [70in]	6538kg [14414 lbs] Gross
380/220	801 / 1001	728 / 910	1521	Height: 2190mm [86in]	





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 Intlet 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
 M427	83.5	74	Length: 6400mm [252in] Width: 2170mm [85in] Height: 2721mm [107in]	8709kg [19200lbs] Net 10000kg [22046lbs] Gross	930 L
 ISO20	86	76	Length: 6058mm [239in] Width: 2438mm [96in] Height: 2896mm [114in]	11165kg [24615lbs] Net 11970kg [26389lbs] Gross	500 L
 CIR20SSi-R	79	69	Length: 6058mm [239in] Width: 2438mm [96in] Height: 2896mm [114in]	13696kg [30195lbs] Net 15856kg [34957lbs] Gross	2000 L
 CIR20SSi	79	69	Length: 6058mm [239in] Width: 2438mm [96in] Height: 2896mm [114in]	13706kg [30217lbs] Net 14244kg [31403lbs] Gross	500 L



ENGINE SPECIFICATIONS

STANDARD FEATURES	Manufacturer / Model	MTU 16V2000G63E , 4-strokes, Turbo , Air/Air DC 16 X
	Cylinder Arrangement	V
	Displacement	31.9L [1946.7C.I.]
	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	897kW [1202BHP]
	Frequency regulation, steady state	+/- 0.5%
	BMEP	20.2bar [293psi]
Governor : type	ELEC	
EXHAUST SYSTEM	Exhaust temperature	535°C [995°F]
	Exhaust gas flow	3100L/s [6569cfm]
	Max back pressure	500mm CE [20in. WG]
FUEL SYSTEM	110% (Stand By power)	226.5L/h [59.8gal/hr]
	100% (of the Prime Power)	203.6L/h [53.8gal/hr]
	75% (of the Prime Power)	150.6L/h [39.8gal/hr]
	50% (of the Prime Power)	101L/h [26.7gal/hr]
	Max. fuel pump flow	450L/h [118.9gal/hr]
OIL SYSTEM	Total oil capacity w/filters	110L [29.1gal]
	Oil Pressure low idle	4bar [58.0psi]
	Oil Pressure rated RPM	6.5bar [94.2psi]
	Oil consumption 100% load	1.02L/h [0.269gal/hr]
	Oil capacity carter	92L [24.3gal]
THERMAL BALANCE	Heat rejection to exhaust	687kW [39063Btu/mn]
	Radiated heat to ambient	50kW [2843Btu/mn]
	Heat rejection to coolant	360kW [20470Btu/mn]
AIR INTAKE	Max. intake restriction	150mm CE [6in. WG]
	Engine air flow	1200L/s [2543cfm]
COOLANT SYSTEM	Radiator & engine capacity	292L [77.1gal]
	Max water temperature	97°C [207°F]
	Outlet water temperature	93°C [199°F]
	Fan power	26 kW
	Fan air flow w/o restriction	18.9m ³ /s [40051cfm]
	Available restriction on air flow	20mm CE [0.8in. WG]
	Type of coolant	Coolelf mdx
	Thermostat	75-88 °C
EMISSIONS LEVEL	PM	N/A
	CO	N/A
	Nox	N/A
	HC	N/A



ALTERNATOR SPECIFICATIONS

GENERAL DATAS	Manufacturer	LEROY SOMER	
	Type	LSA491L10	
	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	R448	
	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	< 1000 ms	
	SkVA with 90% of nominal sustained voltage (at 0.4PF)	N/A	
	OTHER DATAS	Continuous nominal rating @ 40 °C	910 kVA
		Standby rating @ 27 °C	1000 kVA
Efficiencies @ 4/4 load		95.3 %	
Air flow		1m3/s [2118.87cfm]	
Short circuit ratio;50 (Kcc)		0.41	
Direct axis synchro reactance unsaturated (Xd)		315 %	
Quadra axis synchro reactance unsaturated (Xq)		189 %	
Open circuit time constant;50 (T'do)		2111 ms	
Direct axis transient reactance saturated (X'd)		14.9 %	
Short circuit transient time constant (T'd)		100 ms	
Direct axis subtransient reactance saturated (X''d)		11.9 %	
Subtransient time constant (T''d)		10 ms	
Quadra axis subtransient reactance saturated (X''q)		13 %	
Zero sequence reactance unsaturated (Xo)		0.9 %	
Negative sequence reactance saturated (X2)		12.5 %	
Armature time constant (Ta)		15 ms	
No load excitation current (io)		0.9 A	
Full load excitation current (ic)		3.4 A	
Full load excitation voltage (uc)		40 V	
Recovery time (Delta U = 20% transitoire)		< 1000 ms	
Motor start (Delta = 20% perm. Or 50% trans.)	2372 kVA		
Transient dip (4/4 charge) – PF : 1.8 AR	11 %		
No load losses	9.8kW [9.80Kw]		
Heat rejection	37 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...

