

X1000UC

Engine MTU , 16V2000G83
Alternator LEROY SOMER , LSA50.154

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
480/277	1000 / 1250	909 / 1136	1504	Length: 4370mm [172in]	6250kg [13779 lbs] Net
440/254	1000 / 1250	909 / 1136	1640	Width: 1770mm [70in]	6570kg [14484 lbs] Gross
380/220	1000 / 1250	909 / 1136	1899	Height: 2190mm [86in]	
600/347	1000 / 1250	909 / 1136	1203		





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
 M427	88	79	Length: 6400mm [252in] Width: 2170mm [85in] Height: 2721mm [107in]	8909kg [19641lbs] Net 10200kg [22487lbs] Gross	930 L
 ISO20	90	80	Length: 6058mm [239in] Width: 2438mm [96in] Height: 2896mm [114in]	11477kg [25302lbs] Net 12283kg [27079lbs] Gross	500 L
 CIR20SSi-R	83	73	Length: 6058mm [239in] Width: 2438mm [96in] Height: 2896mm [114in]	14009kg [30885lbs] Net 16169kg [35647lbs] Gross	2000 L
 CIR20SSi	83	73	Length: 6058mm [239in] Width: 2438mm [96in] Height: 2896mm [114in]	14019kg [30907lbs] Net 14557kg [32093lbs] Gross	500 L





ENGINE SPECIFICATIONS

STANDARD FEATURES	Manufacturer / Model	MTU 16V2000G83 , 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	14 : 1
	Rated RPM	1800 Rpm
	Piston Speed	9m/s [29.5ft./s]
	Max. stand by Power at rated RPM	1067kW [1430BHP]
	Frequency regulation, steady state	+/- 0.5%
	BMEP	19.4bar [281psi]
Governor : type	ELEC	
EXHAUST SYSTEM	Exhaust temperature	515°C [959°F]
	Exhaust gas flow	3260L/s [6908cfm]
	Max back pressure	500mm CE [20in. WG]
FUEL SYSTEM	110% (Stand By power)	266L/h [70.3gal/hr]
	100% (of the Prime Power)	216.5L/h [57.2gal/hr]
	75% (of the Prime Power)	163L/h [43.1gal/hr]
	50% (of the Prime Power)	114.3L/h [30.2gal/hr]
	Max. fuel pump flow	450L/h [118.9gal/hr]
OIL SYSTEM	Total oil capacity w/filters	110L [29.1gal]
	Oil Pressure low idle	5bar [72.5psi]
	Oil Pressure rated RPM	6bar [86.9psi]
	Oil consumption 100% load	1.08L/h [0.285gal/hr]
	Oil capacity carter	92L [24.3gal]
THERMAL BALANCE	Heat rejection to exhaust	711kW [40427Btu/mn]
	Radiated heat to ambient	50kW [2843Btu/mn]
	Heat rejection to coolant	365kW [20754Btu/mn]
AIR INTAKE	Max. intake restriction	150mm CE [6in. WG]
	Engine air flow	1200L/s [2543cfm]
COOLANT SYSTEM	Radiator & engine capacity	261L [69.0gal]
	Max water temperature	97°C [207°F]
	Outlet water temperature	93°C [199°F]
	Fan power	35 kW
	Fan air flow w/o restriction	22.9m ³ /s [48527cfm]
	Available restriction on air flow	20mm CE [0.8in. WG]
	Type of coolant	Coolelf mdx
	Thermostat	75-88 °C
EMISSIONS LEVEL	PM	0.40 gr/bhp/h Max
	CO	8.50 gr/bhp/h Max
	Nox	6.86 gr/bhp/h Max
	HC	0.97 gr/bhp/h Max

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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	1130 kVA
	Standby rating @ 27°C	1353 kVA
	Efficiencies @ 4/4 load	94.7 %
	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.)	2400 kVA
	Transient dip (4/4 charge) – PF : 1.8 AR	14 %
No load losses	16.5 kW	
Heat rejection	55 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...

