

Model: X1000K

Engine: MTU, 16V2000G63E

Alternator: LEROY SOMER, LSA491L10

Specifications

- Electronic governor
- Mechanically welded chassis with anti-vibration 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



Generator Ratings

Voltage	Power ESP kW/kVA	Power RRP kW/kVA	Standby Amps	Dimensions	Weight
415/240	801/1001	728 / 910	1393	Length: 4370 Width: 1770 Height: 2190	6177kg Net 6538kg Gross
400/230	801/1001	728 / 910	1445		
380/220	801/1001	728 / 910	1521		

RRP: 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 12hour 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.

Terms of Use: Standard reference conditions 25 ° C Air Inlet Temp, 100m A.S.L 60% relative humidity. All engine performance data based on the above mentioned continuous ratings.

Canopy Version

Type	dB(A)@7m	Dimensions	Weight	Tank
M427	74	Length: 6400 Width: 2170 Height: 2721	8709kg Net 10000kg Gross	930 L
ISO20	76	Length: 6058 Width: 2438 Height: 2896	11165kg Net 11970kg Gross	500 L
CIR20SSi-R	69	Length: 6058 Width: 2438 Height: 2896	13696kg Net 15856kg Gross	2000 L
CIR20SSi	69	Length: 6058 Width: 2438 Height: 2896	13706kg Net 14244kg Gross	500 L

All units supplied with canopy as standard except when requested.

Engine Data

Manufacturer/Model	MTU 16V2000G63E, 4-strokes, Turbo
Cylinder arrangement	16 x 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. standby 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]
Total fuel 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 100% load

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

PM	[N/A]
CO	[N/A]
Nox	[N/A]
HC	[N/A]

Alternator Specifications

Manufacturer/Type	LERROY SOMER (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
SUSTAINED SHORT CIRCUIT CURRENT	
TOTAL HARMONICS (TGH/THC)	< 4%
WAVE FROM : NEMA = TIF- TGH/THC	< 50
WAVE FROM: 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 NORMAL SUSTAINED VOLTAGE (AT 0.4PF)	[N/A]

Other Alternator Data

CONTINUOUS NOMINAL RATING @ 40° C	910 kVA
STANDBY RATING @ 27° C	1000 kVA
EFFICIENCIES @ 4/4 LOAD	95.3 %
AIR FLOW	1m ³ /s [2118.87cfm]
SHORT CIRCUIT RATIO: 50 (Kcc)	0.41
DIRECT AXIS SYNCHRO REACTANCE UNSATURATED (Xd)	315 %

Other Alternator Data Continued

QUADRA AXIS SYNCHRO REACTANCE UNSATURATED (X_q)	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 (X_0)	0.9 %
NEGATIVE SEQUENCE REACTANCE SATURATED (X_2)	12.5 %
ARMATURE TIME CONSTANT (T_a)	15 ms
NO LOAD EXCITATION CURRENT (i_o)	0.9 A
FULL LOAD EXCITATION CURRENT (i_c)	3.4 A
FULL LOAD EXCITATION VOLTAGE (u_c)	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 : 1.8AR	11 %
NO LOAD LOSSES	9.8kW [9.80Kw]
HEAT REJECTION	37 kW