

X715K

Engine MTU , 12V2000G23E
Alternator LEROY SOMER , LSA491S4

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	572 / 715	520 / 650	995	Length: 3981mm [157in] Width: 1630mm [64in] Height: 1950mm [77in]	5041kg [11114 lbs] Net 5295kg [11673 lbs] Gross
400/230	572 / 715	520 / 650	1032		
380/220	572 / 715	520 / 650	1086		
240/120	572 / 715	520 / 650	1720		
230/115	572 / 715	520 / 650	1795		
220/110	572 / 715	520 / 650	1876		





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	85.5	76	Length: 6400mm [252in] Width: 2170mm [85in] Height: 2721mm [107in]	7836kg [17275lbs] Net 9020kg [19886lbs] Gross	930 L
 ISO20	85	75	Length: 6058mm [239in] Width: 2438mm [96in] Height: 2896mm [114in]	10017kg [22084lbs] Net 10713kg [23618lbs] Gross	500 L
 CIR20SSi-R	79	69	Length: 6058mm [239in] Width: 2438mm [96in] Height: 2896mm [114in]	12708kg [28016lbs] Net 14821kg [32675lbs] Gross	2000 L
 CIR20SSi	79	69	Length: 6058mm [239in] Width: 2438mm [96in] Height: 2896mm [114in]	12568kg [27708lbs] Net 13080kg [28836lbs] Gross	500 L





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ENGINE SPECIFICATIONS

STANDARD FEATURES	Manufacturer / Model	MTU 12V2000G23E , 4-strokes, Turbo , Air/Air DC 12 X
	Cylinder Arrangement	V
	Displacement	23.9L [1458.5C.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	599kW [803BHP]
	Frequency regulation, steady state	+/- 0.5%
	BMEP	18.9bar [274psi]
Governor : type	ELEC	
EXHAUST SYSTEM	Exhaust temperature	550°C [1022°F]
	Exhaust gas flow	2210L/s [4683cfm]
	Max back pressure	500mm CE [20in. WG]
FUEL SYSTEM	110% (Stand By power)	160L/h [42.3gal/hr]
	100% (of the Prime Power)	145L/h [38.3gal/hr]
	75% (of the Prime Power)	108L/h [28.5gal/hr]
	50% (of the Prime Power)	72.5L/h [19.2gal/hr]
	Max. fuel pump flow	450L/h [118.9gal/hr]
OIL SYSTEM	Total oil capacity w/filters	82L [21.7gal]
	Oil Pressure low idle	4bar [58.0psi]
	Oil Pressure rated RPM	6.5bar [94.2psi]
	Oil consumption 100% load	0.73L/h [0.193gal/hr]
	Oil capacity carter	67L [17.7gal]
THERMAL BALANCE	Heat rejection to exhaust	495kW [28146Btu/mn]
	Radiated heat to ambient	45kW [2559Btu/mn]
	Heat rejection to coolant	255kW [14499Btu/mn]
AIR INTAKE	Max. intake restriction	150mm CE [6in. WG]
	Engine air flow	880L/s [1865cfm]
COOLANT SYSTEM	Radiator & engine capacity	180L [47.6gal]
	Max water temperature	97°C [207°F]
	Outlet water temperature	93°C [199°F]
	Fan power	26 kW
	Fan air flow w/o restriction	16.2m3/s [34329cfm]
	Available restriction on air flow	20mm CE [0.8in. WG]
	Type of coolant	Coolelf mdx
	Thermostat	75-88 °C
EMISSIONS LEVEL	PM	50 mg/Nm3 Max
	CO	650 mg/Nm3 Max
	Nox	2000 mg/Nm3 Max
	HC	150 mg/Nm3 Max

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ALTERNATOR SPECIFICATIONS

GENERAL DATAS	Manufacturer	LEROY SOMER
	Type	LSA491S4
	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 LS/B
	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	660 kVA
	Standby rating @ 27°C	725 kVA
	Efficiencies @ 4/4 load	93.6 %
	Air flow	1m3/s [2118.87cfm]
	Short circuit ratio;50 (Kcc)	0.38
	Direct axis synchro reactance unsaturated (Xd)	343 %
	Quadra axis synchro reactance unsaturated (Xq)	205 %
	Open circuit time constant;50 (T'do)	1958 ms
	Direct axis transient reactance saturated (X'd)	17.5 %
	Short circuit transient time constant (T'd)	100 ms
	Direct axis subtransient reactance saturated (X''d)	14 %
	Subtransient time constant (T''d)	10 ms
	Quadra axis subtransient reactance saturated (X''q)	16.3 %
	Zero sequence reactance unsaturated (Xo)	0.9 %
	Negative sequence reactance saturated (X2)	15.2 %
	Armature time constant (Ta)	15 ms
	No load excitation current (io)	0.9 A
	Full load excitation current (ic)	3.6 A
	Full load excitation voltage (uc)	43 V
	Recovery time (Delta U = 20% transitoire)	500 ms
	Motor start (Delta = 20% perm. Or 50% trans.)	1578 kVA
	Transient dip (4/4 charge) – PF : 1.8 AR	13.3 %
	No load losses	8.1kW [8.10Kw]
	Heat rejection	33.7 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...

