

Model: X715K

Engine: MTU, 12V2000G23E

Alternator: LEROY SOMER, LSA491S4

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	572 / 715	520 / 650	995	Length: 3981 Width: 1630 Height: 1950	5041kg Net 5295kg 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		

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	76	Length: 6400 Width: 2170 Height: 2721	7836kg Net 9020kg Gross	930 L
ISO20	75	Length: 6058 Width: 2438 Height: 2896	10017kg Net 10713kg Gross	500 L
CIR20SSi-R	69	Length: 6058 Width: 2438 Height: 2896	12708kg Net 14821kg Gross	2000 L
CIR20SSi	69	Length: 6058 Width: 2438 Height: 2896	12568kg Net 13080kg Gross	500 L

All units supplied with canopy as standard except when requested.

Engine Data

Manufacturer/Model	MTU 12V2000G23E, 4-strokes, Turbo
Cylinder arrangement	12 x L
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. standby 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]
Total fuel 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 100% load

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	16.2m ³ /s [34329cfm]
Available restriction on air flow	20mm CE [0.8in. WG]
Type of coolant	Coolelf mdx
Thermostat	75-88 °C

Emissions

PM	50 mg/Nm ³ Max
CO	650 mg/Nm ³ Max
Nox	2000 mg/Nm ³ Max
HC	150 mg/Nm ³ Max

Alternator Specifications

Manufacturer/Type	LERROY SOMER (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
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	500 ms
SKVA WITH 90% OF NORMAL SUSTAINED VOLTAGE (AT 0.4PF)	[N/A]

Other Alternator Data

CONTINUOUS NOMINAL RATING @ 40° C	660 kVA
STANDBY RATING @ 27° C	725 kVA
EFFICIENCIES @ 4/4 LOAD	93.6 %
AIR FLOW	1m ³ /s [2118.87cfm]
SHORT CIRCUIT RATIO: 50 (Kcc)	0.38
DIRECT AXIS SYNCHRO REACTANCE UNSATURATED (Xd)	343 %

Other Alternator Data Continued

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 : 1.8AR	13.3 %
NO LOAD LOSSES	8.1kW [8.10Kw]
HEAT REJECTION	33.7 kW