Model: X2800C
Engine: MTU, 20V4000G23
Alternator: LEROY SOMER, LSA53S75

Specifications

- Electronic governor
- Mechanically welded chassis with anti-vibration suspension
- Air cooler for wiring T°of 38/40°C max with electric fan
- Exhaust outlet with flexible and flanges
- 24 V charging alternator and starter
- Supplied with oil
- User manual and commissioning guide

Generator Ratings

Voltage	Power ESP kW/kVA	Power RRP kW/kVA	Standby Amps	Dimensions	Weight
415/240	2240/ 2800	2036/ 2545	3895	Length: 5730 Width: 2250 Height: 2454	17290kg Net 17901kg Gross
400/230	2240/ 2800	2036/ 2545	4042		
380/220	2240/ 2800	2036/ 2545	4254		

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 i 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.

Engine Data

Manufacturer/Model	MTU 20V4000G23E, 4-strokes, Turbo
Cylinder arrangement	20 x V
Displacement	95.4L [5821.7C.I.]
Bore and stroke	170mm [6.7in.] X 210mm [8.3in.]
Compression ratio	16.5
Rated RPM	1500 Rpm
Piston speed	10.5m/s [34.4ft./s]
Max. standby power at rated RPM	2420kW [3243BHP]
Frequency regulation, steady state	+/- 0.5%
BMEP	18.5bar [268psi]
Governor: type	ELEC

Exhaust System

Exhaust temperature	580°C [1076°F]
Exhaust gas flow	7700L/s [16317cfm]
Max back pressure	300mm CE [12in. WG]

Fuel System

110% (Stand by power)	599L/h [158.3gal/hr]
100% (of the Prime Power)	545L/h [144.0gal/hr]
75% (of the Prime Power)	409L/h [108.1gal/hr]
50% (of the Prime Power)	278L/h [73.4gal/hr]
Total fuel flow	1440L/h [380.4gal/hr]

Oil System

Total oil capacity w/filters	390L [103.0gal]
Oil Pressure low idle	4.9bar [71.0psi]
Oil Pressure rated RPM	7.7bar [111.6psi]
Oil consumption 100% load	2.72L/h [0.719gal/hr]
Oil capacity carter	340L [89.8gal]

Thermal balance 100% load

Heat rejection to exhaust	[N/A]
Radiated heat to ambiant	105kW [5970Btu/mn]
Heat rejection to coolant	[N/A]

Air intake

Max. intake restriction	150mm CE [6in. WG]
Engine air flow	2800L/s [5933cfm]

Coolant system

Radiator & engine capacity	[N/A]
Max water temperature	104°C [219°F]
Outlet water temperature	100°C [212°F]
Fan power	[N/A]
Fan air flow w/o restriction	[N/A]
Available restriction on air flow	[N/A]
Type of coolant	Coolelf mdx
Thermostat	79/92 °C

Emissions

PM	50 mg/Nm3 Max
CO	300 mg/Nm3 Max
Nox	1700 mg/Nm3 Max
HC	150 mg/Nm3 Max

Alternator Specifications

Manufacturer/Type	LEROY SOMER (LSA53S75)
NUMBER OF PHASE	3
POWER FACTOR (Cos Phi)	0.8
ALTITUDE	1000
OVERSPEED	2160 rpm
POLE: NUMBER	4
EXCITER TYPE	AREP
INSULATION: CLASS, TEMPERATURE RISE	H/H
VOLTAGE REGULATOR	R449

Alternator Specifications Continued

SUSTAINED SHORT CIRCUIT CURRENT	[N/A]
TOTAL HARMONICS (TGH/THC)	< 2.5%
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	+/- 0.5%
RECOVERY TIME (20% VOLT DIP) MS	800 ms
SkVA WITH 90% OF NORMAL SUSTAINED VOLTAGE (AT 0.4PF)	[N/A]

Other Alternator Data

CONTINUOUS NOMINAL RATING @ 40° C	2648 kVA
STANDBY RATING @ 27° C	2913 kVA
EFFICIENCIES @ 4/4 LOAD	96.3 %
AIR FLOW	2.8m3/s [5932.84cfm]
SHORT CIRCUIT RATIO: 50 (Kcc)	0.46
DIRECT AXIS SYNCHRO REACTANCE UNSATURATED (Xd)	274 %
QUADRA AXIS SYNCHRO REACTANCE UNSATURATED (Xq)	165 %
OPEN CIRCUIT TIME CONSTANT: 50 (T'do)	2880 ms
DIRECT AXIS TRANSIENT REACTANCE SATURATED (X'd)	22.1 %
SHORT CIRCUIT TRANSIENT TIME CONSTANT (T'd)	272 ms
DIRECT AXIS SUBTRANSIENT REACTANCE SATURATED (X'd)	12.1 %
SUBTRANSIENT TIME CONSTANT (T'd)	25 ms
QUADRA AXIS SUBTRANSIENT REACTANCE SATURATED (X'q)	15 %
ZERO SEQUENCE REACTACE UNSATURATED (Xo)	2.8 %
NEGATIVE SEQUENCE REACTANCE SATURATED (X2)	13.6 %
ARMATURE TIME CONSTANT (Ta)	58 ms
NO LOAD EXCITATION CURRENT (io)	1.3 A

Other Alternator Data Continued

FULL LOAD EXCITATION CURRENT (ic)	4.8 A
FULL LOAD EXCITATION VOLTAGE (uc)	52 V
RECOVERY TIME (DELTA U = 20% TRANSITOIRE)	800 ms
MOTOR START (DELTA = 20% PERM. OR 50% TRANS.)	5600 kVA
TRANSIENT DIP (4/4 CHARGE) - PF : 1.8AR	12 %
NO LOAD LOSSES	28kW [28.00Kw]
HEAT REJECTION	81.5 kW