



R220C2

Engine VOLVO , TAD733GE Stage 2
 Alternator LEROY SOMER , LSA462M5

STANDARD FEATURES

- Analog engine
- Connection terminal block "rental type"
- Four-pole breaker
- Central lifting ring
- Rental specific soundproofed canopy
- Diesel low level
- AREP Leroy-Somer Alternator
- Easy radiator access
- Rain cap



Voltage	Power ESP kWe/kVA	Power PRP kWe/kVA	Standby Amps
400/230	176 / 220	160 / 200	318



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 **25 °C** Air Intlet Temp, **1000 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
 M226-DW	78.5	68.5	Long: 3560mm [140in] Wide: 1200mm [47in] Height: 2182mm [86in]	2960kg [lbs] Net 3790kg [lbs] Gross	868 L
 M226	78.5	68.5	Long: 3508mm [138in] Wide: 1200mm [47in] Height: 1830mm [72in]	2540kg [lbs] Net 2890kg [lbs] Gross	340 L

Base Rental Power + options suivantes = Full Rental Power

Double wall and great autonomy tank	Air inlet manifold preheating
Water separator pre-filter	Voltage trimmer
Fixed earth leakage protection with spike	Battery cut-out



ENGINE SPECIFICATIONS

STANDARD FEATURES	Manufacturer / Model	VOLVO TAD733GE , 4-strokes, Turbo , Air/Air DC 6 X
	Cylinder Arrangement	L
	Displacement	7.15L [436.3C.I.]
	Bore and Stroke	130mm [5.1in.] X 108mm [4.3in.]
	Compression ratio	18.1 : 1
	Rated RPM	1500 Rpm
	Piston Speed	6.5m/s [21.3ft./s]
	Max. stand by Power at rated RPM	197kW [264BHP]
	Frequency regulation, steady state	+/- 0.5%
	BMEP	23bar [333psi]
Governor : type	ELEC	
EXHAUST SYSTEM	Exhaust gas flow	565L/s [1197cfm]
	Exhaust temperature	540°C [1004°F]
	Max back pressure	1000mm CE [39in. WG]
FUEL SYSTEM	110% (Stand By power)	47.6L/h [12.6gal/hr]
	100% (of the Prime Power)	42.7L/h [11.3gal/hr]
	75% (of the Prime Power)	31.7L/h [8.4gal/hr]
	50% (of the Prime Power)	21.3L/h [5.6gal/hr]
	Max. fuel pump flow	360L/h [95.1gal/hr]
OIL SYSTEM	Total oil capacity w/filters	34L [9.0gal]
	Oil Pressure low idle	2bar [29.0psi]
	Oil Pressure rated RPM	4bar [58.0psi]
	Oil consumption 100% load	0.08L/h [0.0gal/hr]
	Oil capacity carter	31L [8.2gal]
THERMAL BALANCE	Heat rejection to exhaust	143kW [8131Btu/mn]
	Radiated heat to ambient	13kW [739Btu/mn]
	Heat rejection to coolant	91kW [5174Btu/mn]
AIR INTAKE	Max. intake restriction	250mm CE [10in. WG]
	Engine air flow	211L/s [447cfm]
COOLANT SYSTEM	Radiator & engine capacity	35.8L [9.458gal]
	Max water temperature	105°C [221°F]
	Outlet water temperature	102°C [216°F]
	Fan power	4.4 kW
	Fan air flow w/o restriction	5.5m ³ /s [11655cfm]
	Available restriction on air flow	20mm CE [0.8in. WG]
	Type of coolant	Glycol-Ethylene
	Thermostat	87-102 °C
GAS SYSTEM	HC	0.323 g/KW.h
	CO	0.504 g/KW.h
	Nox	5.813 g/KW.h
	PM	0.064 g/KW.h



ALTERNATOR SPECIFICATIONS

GENERAL DATAS	Manufacturer / Type	LERROY SOMER LSA462M5
	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	3.7 AC
	Total harmonics (TGH/THC)	< 2.5%
	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	+/- 0.5%
	Recovery time (20% Volt dip) ms	500 ms
	SkVA with 90% of nominal sustained voltage (at 0.4PF)	skva
OTHER DATAS	Continuous nominal rating @ 40°C	200 kVA
	Standby rating @ 27°C	223 kVA
	Efficiencies @ 4/4 load	92.3 %
	Air flow	0.43m3/s [911.11cfm]
	Short circuit ratio;50 (Kcc)	0.45
	Direct axis synchro reactance unsaturated (Xd)	301 %
	Quadra axis synchro reactance unsaturated (Xq)	180 %
	Open circuit time constant;50 (T'do)	2042 ms
	Direct axis transient reactance saturated (X'd)	14.7 %
	Short circuit transient time constant (T'd)	100 ms
	Direct axis subtransient reactance saturated (X''d)	8.8 %
	Subtransient time constant (T''d)	10 ms
	Quadra axis subtransient reactance saturated (X''q)	10.9 %
	Zero sequence reactance unsaturated (Xo)	0.8 %
	Negative sequence reactance saturated (X2)	9.9 %
	Armature time constant (Ta)	15 ms
	No load excitation current (io)	1 A
	Full load excitation current (ic)	ic
	Full load excitation voltage (uc)	32 V
	Recovery time (Delta U = 20% transitoire)	500 ms
Motor start (Delta = 20% perm. Or 50% trans.)	434 kVA	
Transient dip (4/4 charge) – PF : 1.8 AR	13.7 %	
No load losses	3.04kW [3.04Kw]	
Heat rejection	13.18 kW	

CONTROL PANEL

Standard



NEXYS

Specifications :

Frequency meter, Ammeter, Voltmeter
Alarms and faults Oil pressure, water temperature, Overcrank, Overspeed (>60 kVA), Min/max alternator, Low fuel level, Emergency stop
Engine parameters Hours counter, Engine speed, Battery voltage, Fuel level, Air preheating

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