

**Model: V550C2**

**Engine: VOLVO, TAD1641GE**

**Alternator: LEROY SOMER, LSA472M7**

## Specifications

- Compliant with stage 2 of the European pollutant emissions directive
- Electronic governor
- Mechanically welded chassis with anti-vibration suspension
- Power circuit breaker
- Radiator for wiring T° of 50°C [122°F] max with mechanical fan
- Protective grille for fan and rotating parts
- 9dB(A) silencer supplied separately
- Charged DC starting battery with electrolyte
- 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	440/550	400 / 500	765	Length: 3470 Width: 1500 Height: 2043	3620kg Net 4160kg Gross
400/230	440/550	400 / 500	794		
380/220	440/550	400 / 500	836		
240/120	440/550	400 / 500	1323		
230/115	440/550	400 / 500	1381		
220/110	440/550	400 / 500	1443		
200/115	440/550	400 / 500	1588		

**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
M229	68	Length: 5031 Width: 1560 Height: 2435	4870kg Net 5410kg Gross	500 L
M229-DW	68	Length: 5083 Width: 1560 Height: 2700	5590kg Net 7240kg Gross	1770 L

All units supplied with canopy as standard except when requested.

## Engine Data

Manufacturer/Model	VOLVO TAD1641GE, 4-strokes, Turbo
Cylinder arrangement	6 x L
Displacement	16.12L [983.7C.I.]
Bore and stroke	144mm [5.7in.] X 165mm [6.5in.]
Compression ratio	16.5 : 1
Rated RPM	1500 Rpm
Piston speed	8.25m/s [27.1ft./s]
Max. standby power at rated RPM	473kW [634BHP]
Frequency regulation, steady state	+/- 0.5%
BMEP	21.34bar [309psi]
Governor: type	ELEC

## Exhaust System

Exhaust temperature	455°C [851°F]
Exhaust gas flow	1533L/s [3249cfm]
Max back pressure	1000mm CE [39in. WG]

## Fuel System

110% (Stand by power)	112.56L/h [29.7gal/hr]
100% (of the Prime Power)	102.05L/h [27.0gal/hr]
75% (of the Prime Power)	75.38L/h [19.9gal/hr]
50% (of the Prime Power)	51.02L/h [13.5gal/hr]
Total fuel flow	170L/h [44.9gal/hr]

## Oil System

Total oil capacity w/filters	48L [12.7gal]
Oil Pressure low idle	0.7bar [10.1psi]
Oil Pressure rated RPM	6.5bar [94.2psi]
Oil consumption 100% load	0.1L/h [0.026gal/hr]
Oil capacity carter	42L [11.1gal]

## Thermal balance 100% load

Heat rejection to exhaust	326kW [18536Btu/mn]
Radiated heat to ambient	20kW [1137Btu/mn]
Heat rejection to coolant	184kW [10462Btu/mn]

## Air intake

Max. intake restriction	500mm CE [20in. WG]
Engine air flow	633L/s [1341cfm]

## Coolant system

Radiator & engine capacity	60L [15.9gal]
Max water temperature	103°C [217°F]
Outlet water temperature	93°C [199°F]
Fan power	11 kW
Fan air flow w/o restriction	10.9m <sup>3</sup> /s [23098cfm]
Available restriction on air flow	30mm CE [1.2in. WG]
Type of coolant	Glycol-Ethylene
Thermostat	86-96 °C

## Emissions

PM	0.086 g/KW.h
CO	1.15 g/KW.h
Nox	5.34 g/KW.h
HC	0.12 g/KW.h

## Alternator Specifications

Manufacturer/Type	LEROY SOMER (LSA472M7)
NUMBER OF PHASE	3
POWER FACTOR (Cos Phi)	0.8
ALTITUDE	< 1000 m
OVERSPEED	2250 rpm
POLE: NUMBER	4
EXCITER TYPE	SHUNT
INSULATION: CLASS, TEMPERATURE RISE	H/H
VOLTAGE REGULATOR	R230
SUSTAINED SHORT CIRCUIT CURRENT	
TOTAL HARMONICS (TGH/THC)	< 2 %
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	500 ms
SkVA WITH 90% OF NORMAL SUSTAINED VOLTAGE (AT 0.4PF)	[N/A]

## Other Alternator Data

CONTINUOUS NOMINAL RATING @ 40° C	500 kVA
STANDBY RATING @ 27° C	570 kVA
EFFICIENCIES @ 4/4 LOAD	94.5 %
AIR FLOW	0.9m <sup>3</sup> /s [1906.98cfm]
SHORT CIRCUIT RATIO: 50 (Kcc)	0.41
DIRECT AXIS SYNCHRO REACTANCE UNSATURATED (Xd)	307 %
QUADRA AXIS SYNCHRO REACTANCE UNSATURATED (Xq)	184 %
OPEN CIRCUIT TIME CONSTANT: 50 (T'do)	1930 ms
DIRECT AXIS TRANSIENT REACTANCE SATURATED (X'd)	15.9 %
SHORT CIRCUIT TRANSIENT TIME CONSTANT (T'd)	100 ms

## Other Alternator Data Continued

DIRECT AXIS SUBTRANSIENT REACTANCE SATURATED (X'd)	12.7 %
SUBTRANSIENT TIME CONSTANT (T'd)	10 ms
QUADRA AXIS SUBTRANSIENT REACTANCE SATURATED (X'q)	16.8 %
ZERO SEQUENCE REACTANCE UNSATURATED (X <sub>0</sub> )	0.7 %
NEGATIVE SEQUENCE REACTANCE SATURATED (X <sub>2</sub> )	14.8 %
ARMATURE TIME CONSTANT (T <sub>a</sub> )	15 ms
NO LOAD EXCITATION CURRENT (i <sub>0</sub> )	1 A
FULL LOAD EXCITATION CURRENT (i <sub>c</sub> )	3.6 A
FULL LOAD EXCITATION VOLTAGE (u <sub>c</sub> )	36 V
RECOVERY TIME (DELTA U = 20% TRANSITOIRE)	500 ms
MOTOR START (DELTA = 20% PERM. OR 50% TRANS.)	1073 kVA
TRANSIENT DIP (4/4 CHARGE) - PF : 1.8AR	14.6 %
NO LOAD LOSSES	6.54kW [6.54Kw]
HEAT REJECTION	23.04 kW