

# V350C2

Stage 2  
 Engine VOLVO , TAD941GE  
 Alternator LEROY SOMER , LSA462VL12

## STANDARD FEATURES

- Compliant with stage 2 of the european pollutant emissions directive
- Electronic governor
- Mechanically welded chassis with antivibration 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



Voltage	Power ESP kWe/kVA	Power PRP kWe/kVA	Standby Amps	Dimensions	Weight
415/240	264 / 330	240 / 300	459	Length: 3160mm [124in] Width: 1340mm [53in] Height: 1761mm [69in]	2850kg [6283 lbs] Net 3320kg [7319 lbs] Gross
400/230	280 / 350	255 / 318	505		
380/220	280 / 350	255 / 318	532		
240/120	264 / 330	240 / 300	794		
230/115	280 / 350	255 / 318	879		
220/110	280 / 350	255 / 318	919		
200/115	264 / 330	240 / 300	953		



## 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 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
 M228	77.2	67	Length: 4475mm [176in] Width: 1410mm [56in] Height: 2430mm [96in]	3980kg [8774lbs] Net 4450kg [9811lbs] Gross	470 L
 M228-DW	77.2	67	Length: 4527mm [178in] Width: 1410mm [56in] Height: 2700mm [106in]	4320kg [9524lbs] Net 5688kg [12540lbs] Gross	1368 L





## ENGINE SPECIFICATIONS

STANDARD FEATURES	Manufacturer / Model	VOLVO TAD941GE , 4-strokes, Turbo , Air/Air DC 6 X
	Cylinder Arrangement	L
	Displacement	9.36L [571.2C.I.]
	Bore and Stroke	120mm [4.7in.] X 138mm [5.4in.]
	Compression ratio	17.4 : 1
	Rated RPM	1500 Rpm
	Piston Speed	6.9m/s [22.6ft./s]
	Max. stand by Power at rated RPM	320kW [429BHP]
	Frequency regulation, steady state	+/- 0.5%
	BMEP	26bar [377psi]
	Governor : type	ELEC
EXHAUST SYSTEM	Exhaust temperature	519°C [966°F]
	Exhaust gas flow	775L/s [1642cfm]
	Max back pressure	1000mm CE [39in. WG]
FUEL SYSTEM	110% (Stand By power )	75.9L/h [20.1gal/hr]
	100% (of the Prime Power)	68.1L/h [18.0gal/hr]
	75% (of the Prime Power)	50.6L/h [13.4gal/hr]
	50% (of the Prime Power)	35.1L/h [9.3gal/hr]
	Max. fuel pump flow	108L/h [28.5gal/hr]
OIL SYSTEM	Total oil capacity w/filters	33L [8.7gal]
	Oil Pressure low idle	0.7bar [10.1psi]
	Oil Pressure rated RPM	6bar [86.9psi]
	Oil consumption 100% load	0.06L/h [0.016gal/hr]
	Oil capacity carter	28L [7.4gal]
THERMAL BALANCE	Heat rejection to exhaust	224kW [12737Btu/mn]
	Radiated heat to ambient	9kW [512Btu/mn]
	Heat rejection to coolant	129kW [7335Btu/mn]
AIR INTAKE	Max. intake restriction	500mm CE [20in. WG]
	Engine air flow	295L/s [625cfm]
COOLANT SYSTEM	Radiator & engine capacity	41L [10.8gal]
	Max water temperature	103°C [217°F]
	Outlet water temperature	93°C [199°F]
	Fan power	15 kW
	Fan air flow w/o restriction	5.9m <sup>3</sup> /s [12503cfm]
	Available restriction on air flow	20mm CE [0.8in. WG]
	Type of coolant	Glycol-Ethylene
	Thermostat	82-92 °C
EMISSIONS LEVEL	PM	30 mg/Nm <sup>3</sup>
	CO	340 mg/Nm <sup>3</sup>
	Nox	2200 mg/Nm <sup>3</sup>
	HC	30 mg/Nm <sup>3</sup>

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## ALTERNATOR SPECIFICATIONS

GENERAL DATAS	Manufacturer	LEROY SOMER
	Type	LSA462VL12
	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
	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	300 kVA
	Standby rating @ 27°C	341 kVA
	Efficiencies @ 4/4 load	93.7 %
	Air flow	0.43m <sup>3</sup> /s [911.11cfm]
	Short circuit ratio;50 (Kcc)	0.5
	Direct axis synchro reactance unsaturated (Xd)	273 %
	Quadra axis synchro reactance unsaturated (Xq)	164 %
	Open circuit time constant;50 (T'do)	2260 ms
	Direct axis transient reactance saturated (X'd)	12.1 %
	Short circuit transient time constant (T'd)	105 ms
	Direct axis subtransient reactance saturated (X''d)	7.3 %
	Subtransient time constant (T''d)	10 ms
	Quadra axis subtransient reactance saturated (X''q)	9 %
	Zero sequence reactance unsaturated (Xo)	0.5 %
	Negative sequence reactance saturated (X2)	8.1 %
	Armature time constant (Ta)	16 ms
	No load excitation current (io)	1.1 A
	Full load excitation current (ic)	3.5 A
	Full load excitation voltage (uc)	35 V
	Recovery time (Delta U = 20% transitoire)	500 ms
	Motor start (Delta = 20% perm. Or 50% trans.)	850 kVA
	Transient dip (4/4 charge) – PF : 1.8 AR	13 %
No load losses	4.9kW [4.90Kw]	
Heat rejection	16.7 kW	

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## CONTROL PANEL

### Standard



### 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...

