

# V275C2

Stage 2  
 Engine VOLVO , TAD734GE  
 Alternator LEROY SOMER , LSA462L6

## 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	211 / 264	192 / 240	367	Length: 2900mm [114in] Width: 1300mm [51in] Height: 1660mm [65in]	2200kg [4850 lbs] Net 2590kg [5710 lbs] Gross
400/230	220 / 275	200 / 250	397		
380/220	220 / 275	200 / 250	418		
240/120	211 / 264	192 / 240	635		
230/115	220 / 275	200 / 250	690		
220/110	220 / 275	200 / 250	722		
200/115	220 / 275	200 / 250	794		



### 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
 M227	77.8	67.8	Length: 4004mm [158in]	3130kg [6900lbs] Net	390 L
			Width: 1380mm [54in] Height: 2145mm [84in]	3520kg [7760lbs] Gross	
 M227-DW	77.8	67.8	Length: 4056mm [160in]	3850kg [8488lbs] Net	950 L
			Width: 1380mm [54in] Height: 2340mm [92in]	4720kg [10406lbs] Gross	



## ENGINE SPECIFICATIONS

STANDARD FEATURES	Manufacturer / Model	VOLVO TAD734GE , 4-strokes, Turbo , Air/Air DC 6 X
	Cylinder Arrangement	L
	Displacement	7.15L [436.3C.I.]
	Bore and Stroke	108mm [4.3in.] X 130mm [5.1in.]
	Compression ratio	17.1 : 1
	Rated RPM	1500 Rpm
	Piston Speed	6.5m/s [21.3ft./s]
	Max. stand by Power at rated RPM	241kW [323BHP]
	Frequency regulation, steady state	+/- 0.5%
	BMEP	28bar [406psi]
Governor : type	ELEC	
EXHAUST SYSTEM	Exhaust temperature	550 °C [1022 °F]
	Exhaust gas flow	557L/s [1180cfm]
	Max back pressure	750mm CE [30in. WG]
FUEL SYSTEM	110% (Stand By power )	59.6L/h [15.7gal/hr]
	100% (of the Prime Power)	53.4L/h [14.1gal/hr]
	75% (of the Prime Power)	42.6L/h [11.3gal/hr]
	50% (of the Prime Power)	30.5L/h [8.1gal/hr]
	Max. fuel pump flow	300L/h [79.3gal/hr]
OIL SYSTEM	Total oil capacity w/filters	29L [7.7gal]
	Oil Pressure low idle	1bar [14.5psi]
	Oil Pressure rated RPM	4.5bar [65.2psi]
	Oil consumption 100% load	0.01L/h [0.003gal/hr]
	Oil capacity carter	24L [6.3gal]
THERMAL BALANCE	Heat rejection to exhaust	177kW [10064Btu/mn]
	Radiated heat to ambient	26kW [1478Btu/mn]
	Heat rejection to coolant	129kW [7335Btu/mn]
AIR INTAKE	Max. intake restriction	300mm CE [12in. WG]
	Engine air flow	272L/s [576cfm]
COOLANT SYSTEM	Radiator & engine capacity	[N/A]
	Max water temperature	103 °C [217 °F]
	Outlet water temperature	93 °C [199 °F]
	Fan power	9.2 kW
	Fan air flow w/o restriction	4.8m <sup>3</sup> /s [10172cfm]
	Available restriction on air flow	20mm CE [0.8in. WG]
	Type of coolant	Glycol-Ethylene
	Thermostat	83-95 °C
EMISSIONS LEVEL	PM	0.049 g/KW.h
	CO	0.350 g/KW.h
	Nox	5.014 g/KW.h
	HC	0.079 g/KW.h



## ALTERNATOR SPECIFICATIONS

GENERAL  DATAS	Manufacturer	LEROY SOMER	
	Type	LSA462L6	
	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)	< 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)	N/A	
	OTHER  DATAS	Continuous nominal rating @ 40 °C	250 kVA
		Standby rating @ 27 °C	275 kVA
Efficiencies @ 4/4 load		92.4 %	
Air flow		0.43m <sup>3</sup> /s [911.11cfm]	
Short circuit ratio;50 (Kcc)		0.41	
Direct axis synchro reactance unsaturated (Xd)		327 %	
Quadra axis synchro reactance unsaturated (Xq)		196 %	
Open circuit time constant;50 (T'do)		2105 ms	
Direct axis transient reactance saturated (X'd)		15.5 %	
Short circuit transient time constant (T'd)		100 ms	
Direct axis subtransient reactance saturated (X''d)		9.3 %	
Subtransient time constant (T''d)		10 ms	
Quadra axis subtransient reactance saturated (X''q)		11.5 %	
Zero sequence reactance unsaturated (Xo)		0.7 %	
Negative sequence reactance saturated (X2)		10.4 %	
Armature time constant (Ta)		15 ms	
No load excitation current (io)		1 A	
Full load excitation current (ic)		4 A	
Full load excitation voltage (uc)		34 V	
Recovery time (Delta U = 20% transitoire)		500 ms	
Motor start (Delta = 20% perm. Or 50% trans.)	462 kVA		
Transient dip (4/4 charge) – PF : 1.8 AR	15.9 %		
No load losses	3.69kW [3.69Kw]		
Heat rejection	16.4 kW		



## CONTROL PANEL

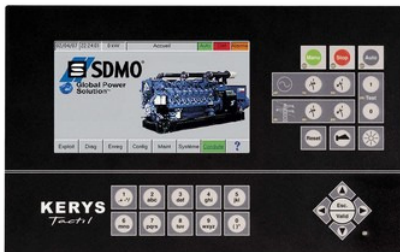
### Standard



### 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...

