



V275K

DIESEL GENSET

MODEL	V275K
Stand-by Power @ 50Hz	220kW / 275 kVA
Prime Power @ 50Hz	200 kW / 250 kVA

Standard Features

General features :

- Engine (VOLVO , TAD740GE )
- Charge alternator 24 V , Governor:Elec
- Alternator (LEROY SOMER , LSA462L6 )
- Single bearing alternator IP 23 , insulation class H /H
- Radiator 50°C [122°F]°C max. T° air inlet with coolant cap
- Skid and vibration isolators
- Dry type air filter
- Main line circuit breaker
- Microprocessor control panel
- 24 V battery, rack and cable
- Industrial silencer (loose)
- User manual



Generator Ratings

Voltage	HZ	Phase	P.F	Standby Amps	Standby Ratings kW/kVA	Prime Ratings kW/kVA
415/240	50	3	0.8	367	211 / 264	192 / 240
400/230	50	3	0.8	397	220 / 275	200 / 250
380/220	50	3	0.8	418	220 / 275	200 / 250
240/120	50	3	0.8	635	211 / 264	192 / 240
230/115	50	3	0.8	690	220 / 275	200 / 250
220/110	50	3	0.8	722	220 / 275	200 / 250
200/115	50	3	0.8	794	220 / 275	200 / 250

**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.

Conditions of sale

- SDMO provides a full line of products with high quality recognized engines and alternators.
- Service and parts are available from SDMO distributors as a single source of responsibility.
- Each and every units is factory tested. All generator sets are also prototype tested.
- Warranty according to our standard conditions. Five years extended also available



## ENGINE DATA

Manufacturer / Model	VOLVO TAD740GE , 4-cycle, Turbo , Air/Air DC
Cylinder Arrangement	6 X L
Displacement	7.28L [444.3C.I.]
Bore and Stroke	107mm [4.2in.] X 135mm [5.3in.]
Compression ratio	17.2 : 1
Rated RPM	1500 Rpm
Piston Speed	6.75m/s [22.1ft./s]
Max. stand by Power at rated RPM	242kW [324BHP]
Frequency regulation, steady state	+/-0.5%
BMEP	25bar [362psi]
Governor : type	Elec

### Exhaust System

Exhaust gas flow	653L/s [1384cfm]
Exhaust temperature	540°C [1004°F]
Max back pressure	1000mm CE [39in. WG]

### Fuel System

110% (Stand By power )	55.5L/h [14.7gal/hr]
100% (of the Prime Power)	50.5L/h [13.3gal/hr]
75% (of the Prime Power)	37.5L/h [9.9gal/hr]
50% (of the Prime Power)	25.2L/h [6.7gal/hr]
Total fuel flow	110L/h [29.1gal/hr]

### Oil System

Total oil capacity w/filters	29L [7.7gal]
Oil Pressure low idle	0.7bar [10.1psi]
Oil Pressure rated RPM	5bar [72.5psi]
Oil consumption 100% load	0.05L/h [0.0gal/hr]
Oil capacity carter	24L [6.3gal]

### Thermal balance 100% load

Heat rejection to exhaust	160kW [9098Btu/mn]
Radiated heat to ambient	13kW [739Btu/mn]
Heat rejection to coolant	99kW [5629Btu/mn]

### Air intake

Max. intake restriction	500mm CE [20in. WG]
Engine air flow	245L/s [519cfm]

### Coolant System

Radiator & engine capacity	36.9L [9.7gal]
Max water temperature	103°C [217°F]
Outlet water temperature	93°C [199°F]
Fan power	5 kW
Fan air flow	5.4m3/s [11443cfm]
Available restriction on air flow	45mm CE [1.8in. WG]
Type of coolant	Glycol-Ethylene
Thermostat	75-88 °C

### Emissions

HC	30 mg/Nm3
CO	330 mg/Nm3
Nox	2800 mg/Nm3
PM	57.2 mg/Nm3



## ALTERNATOR SPECIFICATIONS

### GENERAL DATA

- Compliance with NEMA MG21, UTE NF C51.111, VDE 0530, BS 4999, CSA standards.
- Vacuum-impregnated windings with epoxy varnish.
- IP21 drip proof.

### ALTERNATOR DATA

Manufacturer / Type	LEROY SOMER 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
Sustained short circuit current	N/A
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 0.4 PF)	670

### OTHER ALTERNATOR DATA

Continuous nominal rating @ 40°C	300 kVA
Standby rating @ 27°C	337 kVA
Efficiencies @ 4/4 load	92.8 %
Air flow	0.51m <sup>3</sup> /s [1080.62cfm]
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)	2100 ms
Direct axis transient reactance saturated (X'd)	15.5 %
Short circuit transient time constant (T'd)	105 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)	0.5 %
Negative sequence reactance saturated (X2)	10.4 %
Armature time constant (Ta)	16 ms
No load excitation current (io)	1.1 A
Full load excitation current (ic)	4 A
Full load excitation voltage (uc)	35 V
Recovery time (Delta U = 20% transitoire)	< 500 ms
Motor start (Delta = 20% perm. Or 50% trans.)	700 kVA
Transient dip (4/4 charge) – PF : 1.8 AR	16 %
No load losses	5.65 kW
Heat rejection	18.5 kW

Control Panels

**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

**KERYS**



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- 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...

**M80**



Specifications :

- Tachometer, Emergency stop button, client connection terminal strip, EC certified
- Engine parameters : Hours counter, Oil pressure gauge, Water temperature indicator, Oil pressure indicator

## Options

### Engine and Radiator

- Heat shield protection
- Oil drain extension
- Heavy duty air filter
- Lube oil drain pump
- Radiator core guard
- Battery charger
- Block heater

### Alternator

- Anti condensation heater
- Enforced impregnation
- Oversized alternator

### Control panel

- NFPA 110 level 1
- Paralleling system
- Remote annunciator
- Oil temperature shutdown

### Exhaust

- Residential silencer
- Critical silencer
- Flexible exhaust conn.

### Literature

- Parts
- Maintenance

### Fuel

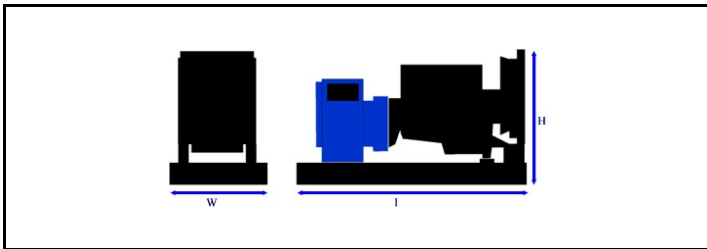
- Day tank
- Subbase fuel tanks UL
- Water separator fuel filter

### Enclosure

- M227
- Silent 68 db @ 7m [23 Ft] (stby)

## Weight and Dimensions

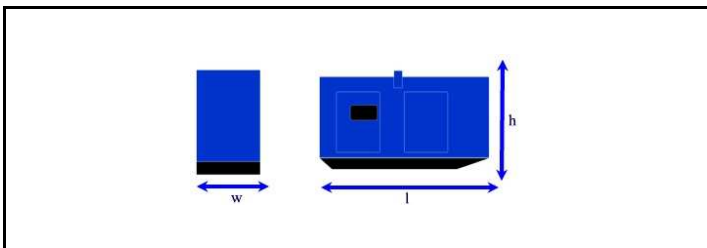
### Open Model Excluding option



Overall size l x w x h :  
2900mm [114in] x 1300mm [51in] x 1690mm [67in]

Weight :  
2250kg [4959lbs] Net 2650kg [5841lbs] Brut

### With Optional Enclosure



Overall size l x w x h :  
4004mm [158in] x 1380mm [54in] x 2125mm [84in]

Weight :  
3200kg [7053lbs] Net 3590kg [7912lbs] Brut