

## V300UC

## DIESEL GENSET

MODEL	V300UC
Stand-by Power @ 60Hz	300kW / 375 kVA
Prime Power @ 60Hz	273 kW / 341 kVA

### Standard Features

#### General features :

- Engine (VOLVO , TAD941GE )
- Engine EPA Carb Charge alternator 24 V , Governor:Elec
- Alternator (LEROY SOMER , LSA462VL12 )
- 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 ^pCSA Certified (consult us)



### Generator Ratings

Voltage	HZ	Phase	P.F	Standby Amps	Standby Ratings kW/kVA	Prime Ratings kW/kVA
480/277	60	3	0.8	451	300 / 375	273 / 341
440/254	60	3	0.8	492	300 / 375	273 / 341
240/120	60	3	0.8	902	300 / 375	273 / 341
230/115	60	3	0.8	941	300 / 375	273 / 341
220/127	60	3	0.8	984	300 / 375	273 / 341
208/120	60	3	0.8	1041	300 / 375	273 / 341
600/347	60	3	0.8	361	300 / 375	273 / 341

**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 TAD941GE , 4-cycle, Turbo , Air/Air DC
Cylinder Arrangement	6 X L
Displacement	9.36L [571.2C.l.]
Bore and Stroke	120mm [4.7in.] X 138mm [5.4in.]
Compression ratio	17.4:01
Rated RPM	1800 Rpm
Piston Speed	9m/s [29.5ft./s]
Max. stand by Power at rated RPM	378kW [507BHP]
Frequency regulation, steady state	+/-0.5%
BMEP	19.7bar [285psi]
Governor : type	Elec

### Exhaust System

Exhaust gas flow	1100L/s [2331cfm]
Exhaust temperature	465°C [869°F]
Max back pressure	1000mm CE [39in. WG]

### Fuel System

110% (Stand By power )	89.2L/h [23.6gal/hr]
100% (of the Prime Power)	79.2L/h [20.9gal/hr]
75% (of the Prime Power)	58.5L/h [15.5gal/hr]
50% (of the Prime Power)	39.8L/h [10.5gal/hr]
Total fuel flow	550L/h [145.3gal/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	0.12L/h [0.0gal/hr]
Oil capacity carter	28L [7.4gal]

### Thermal balance 100% load

Heat rejection to exhaust	272kW [15466Btu/mn]
Radiated heat to ambient	20kW [1137Btu/mn]
Heat rejection to coolant	139kW [7904Btu/mn]

### Air intake

Max. intake restriction	500mm CE [20in. WG]
Engine air flow	467L/s [990cfm]

### 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	9.35m <sup>3</sup> /s [19813cfm]
Available restriction on air flow	77mm CE [3.0in. WG]
Type of coolant	Glycol-Ethylene
Thermostat	82-92 °C

### Emissions

HC	41.03 gr/bhp/h
CO	8.21 gr/bhp/h
Nox	41.03 gr/bhp/h
PM	7.46 gr/bhp/h



## 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 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
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)	1008

### OTHER ALTERNATOR DATA

Continuous nominal rating @ 40°C	381 kVA
Standby rating @ 27°C	429 kVA
Efficiencies @ 4/4 load	93.9 %
Air flow	0.51m3/s [1080.62cfm]
Short circuit ratio;50 (Kcc)	0.5
Direct axis synchro reactance unsaturated (Xd)	276 %
Quadra axis synchro reactance unsaturated (Xq)	166 %
Open circuit time constant;50 (T'do)	2260 ms
Direct axis transient reactance saturated (X'd)	12.2 %
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)	0.3 %
Negative sequence reactance saturated (X2)	8.2 %
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.)	1000 kVA
Transient dip (4/4 charge) – PF : 1.8 AR	13.5 %
No load losses	7.3 kW
Heat rejection	19.5 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**



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...

**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

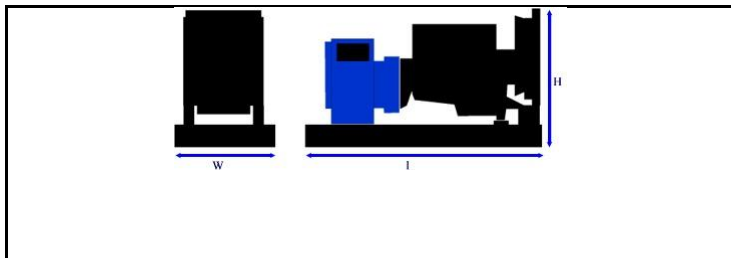


## Options

Engine and Radiator	Alternator	Control panel
<ul style="list-style-type: none"> <li>Heat shield protection</li> <li>Oil drain extension</li> <li>Heavy duty air filter</li> <li>Lube oil drain pump</li> <li>Radiator core guard</li> <li>Battery charger</li> <li>Block heater</li> </ul>	<ul style="list-style-type: none"> <li>Anti condensation heater</li> <li>Enforced impregnation</li> <li>Oversized alternator</li> </ul>	<ul style="list-style-type: none"> <li>NFPA 110 level 1</li> <li>Paralleling system</li> <li>Remote annunciator</li> <li>Oil temperature shutdown</li> <li>Key start panel</li> </ul>
	Exhaust	Literature
	<ul style="list-style-type: none"> <li>Residential silencer</li> <li>Critical silencer</li> <li>Flexible exhaust conn.</li> </ul>	<ul style="list-style-type: none"> <li>Parts</li> <li>Maintenance</li> </ul>
Fuel	Enclosure	
<ul style="list-style-type: none"> <li>Day tank</li> <li>Subbase fuel tanks UL</li> <li>Water separator fuel filter</li> </ul>	<ul style="list-style-type: none"> <li>M228</li> <li>Silent 69.9 db @ 7m [23 Ft] (stby)</li> </ul>	

## Weight and Dimensions

### Open Model Excluding option



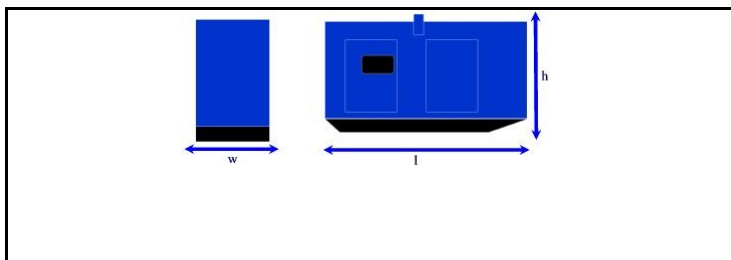
Overall size l x w x h :

3160mm [124in] x 1340mm [53in] x 1761mm [69in]

Weight :

2850kg [6281lbs] Net 3320kg [7317lbs] Brut

### With Optional Enclosure



Overall size l x w x h :

4475mm [176in] x 1410mm [56in] x 2430mm [96in]

Weight :

3980kg [8772lbs] Net 4450kg [9808lbs] Brut