



V400UC

DIESEL GENSET

MODEL	V400UC
Stand-by Power @ 60Hz	400kW / 500 kVA
Prime Power @ 60Hz	364 kW / 455 kVA

Standard Features

General features :

- Engine (VOLVO , TAD1242GE)
- Engine EPA Carb Charge alternator 24 V , Governor:Elec
- Alternator (LEROY SOMER , LSA472VS3)
- 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	601	400 / 500	364 / 455
440/254	60	3	0.8	656	400 / 500	364 / 455
380/220	60	3	0.8	760	400 / 500	364 / 455
240/120	60	3	0.8	1164	387 / 484	352 / 440
230/115	60	3	0.8	1162	370 / 463	337 / 421
220/127	60	3	0.8	1312	400 / 500	364 / 455
208/120	60	3	0.8	1343	387 / 484	352 / 440
600/347	60	3	0.8	481	400 / 500	364 / 455

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 TAD1242GE , 4-cycle, Turbo , Air/Air DC
Cylinder Arrangement	6 X L
Displacement	12.13L [740.2C.I.]
Bore and Stroke	131mm [5.2in.] X 150mm [5.9in.]
Compression ratio	17.5 : 1
Rated RPM	1800 Rpm
Piston Speed	9m/s [29.5ft./s]
Max. stand by Power at rated RPM	430kW [576BHP]
Frequency regulation, steady state	+/-0. 5%
BMEP	22.5bar [326psi]
Governor : type	Elec

Exhaust System

Exhaust gas flow	1250L/s [2649cfm]
Exhaust temperature	505°C [941°F]
Max back pressure	1000mm CE [39in. WG]

Fuel System

110% (Stand By power)	106L/h [28.0gal/hr]
100% (of the Prime Power)	92.7L/h [24.5gal/hr]
75% (of the Prime Power)	67.8L/h [17.9gal/hr]
50% (of the Prime Power)	45.5L/h [12.0gal/hr]
Total fuel flow	550L/h [145.3gal/hr]

Oil System

Total oil capacity w/filters	35L [9.2gal]
Oil Pressure low idle	2.5bar [36.2psi]
Oil Pressure rated RPM	5.5bar [79.7psi]
Oil consumption 100% load	0.14L/h [0.0gal/hr]
Oil capacity carter	31L [8.2gal]

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	500L/s [1060cfm]

Coolant System

Radiator & engine capacity	44L [11.6gal]
Max water temperature	103°C [217°F]
Outlet water temperature	93°C [199°F]
Fan power	19 kW
Fan air flow	10.3m ³ /s [21827cfm]
Available restriction on air flow	47mm CE [1.9in. WG]
Type of coolant	Glycol-Ethylene
Thermostat	82-95 °C

Emissions

HC	43.27 gr/bhp/h
CO	3.73 gr/bhp/h
Nox	43.27 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	LERROY SOMER LSA472VS3
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	+/- 0.5%
Recovery time (20% Volt dip) ms	500 ms
SKVA with 90 % of nominal sustained voltage (at 0.4 PF)	N/A

OTHER ALTERNATOR DATA

Continuous nominal rating @ 40°C	466 kVA
Standby rating @ 27°C	545 kVA
Efficiencies @ 4/4 load	93.3 %
Air flow	1.1m3/s [2330.76cfm]
Short circuit ratio;50 (Kcc)	0.29
Direct axis synchro reactance unsaturated (Xd)	405 %
Quadra axis synchro reactance unsaturated (Xq)	243 %
Open circuit time constant;50 (T'do)	1771 ms
Direct axis transient reactance saturated (X'd)	22.8 %
Short circuit transient time constant (T'd)	100 ms
Direct axis subtransient reactance saturated (X''d)	18.3 %
Subtransient time constant (T''d)	10 ms
Quadra axis subtransient reactance saturated (X''q)	24.7 %
Zero sequence reactance unsaturated (Xo)	1 %
Negative sequence reactance saturated (X2)	21.5 %
Armature time constant (Ta)	15 ms
No load excitation current (io)	0.9 A
Full load excitation current (ic)	4 A
Full load excitation voltage (uc)	40 V
Recovery time (Delta U = 20% transitoire)	500 ms
Motor start (Delta = 20% perm. Or 50% trans.)	973 kVA
Transient dip (4/4 charge) – PF : 1.8 AR	18.5 %
No load losses	8.15 kW
Heat rejection	28.18 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...

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Specifications :

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

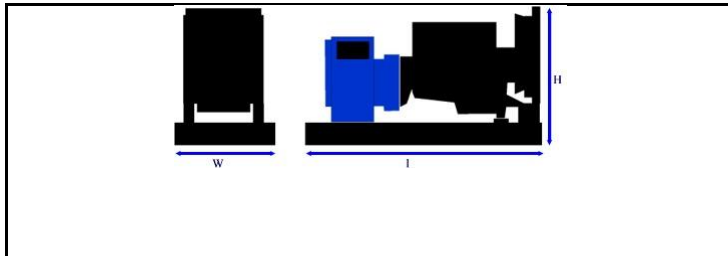


Options

<p>Engine and Radiator</p> <ul style="list-style-type: none"> Heat shield protection Oil drain extension Heavy duty air filter Lube oil drain pump Radiator core guard Battery charger Block heater 	<p>Alternator</p> <ul style="list-style-type: none"> Anti condensation heater Enforced impregnation Oversized alternator 	<p>Control panel</p> <ul style="list-style-type: none"> NFPA 110 level 1 Paralleling system Remote annunciator Oil temperature shutdown Key start panel
<p>Fuel</p> <ul style="list-style-type: none"> Day tank Subbase fuel tanks UL Water separator fuel filter 	<p>Exhaust</p> <ul style="list-style-type: none"> Residential silencer Critical silencer Flexible exhaust conn. 	<p>Literature</p> <ul style="list-style-type: none"> Parts Maintenance
	<p>Enclosure</p> <ul style="list-style-type: none"> M228 Silent 73 db @ 7m [23 Ft] (stby) 	

Weight and Dimensions

Open Model Excluding option



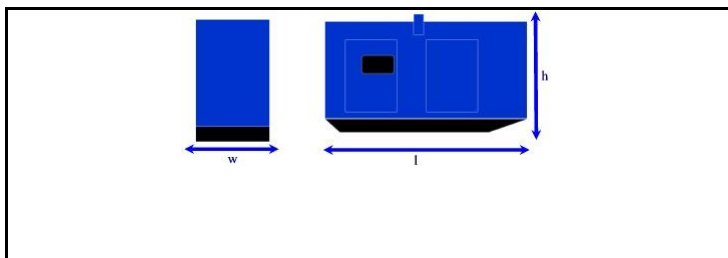
Overall size l x w x h :

3160mm [124in] x 1340mm [53in] x 1805mm [71in]

Weight :

3040kg [6700lbs] Net 3110kg [6854lbs] Brut

With Optional Enclosure



Overall size l x w x h :

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

Weight :

4160kg [9169lbs] Net 4240kg [9345lbs] Brut