

# V440C2

Engine VOLVO , TAD1242GE  
Alternator LEROY SOMER , LSA472VS3

## STANDARD FEATURES

- Electronic governor
- Mechanically welded chassis with antivibration suspension
- Main line circuit breaker
- Radiator for wiring temperature of 48/50°C max with mechanical fan
- Protective grille for fan and rotating parts
- 9 dB(A) silencer supplied separately
- Charger DC starting battery with electrolyte
- 24 V charge alternator and starter
- Delivered with oil and coolant -30°C
- Manual for use and installation



Voltage	Power ESP kWe/kVA	Power PRP kWe/kVA	Standby Amps	Dimensions	Weight
415/240	352 / 440	320 / 400	612		
400/230	352 / 440	320 / 400	635	Leng : 3160mm [124in]	3238kg [7139lbs] Net
380/220	348 / 435	316 / 395	661	Widt : 1340mm [53in]	3718kg [8197lbs] Gross
240 TRI	352 / 440	320 / 400	1059	Heig : 1805mm [71in]	
230 TRI	352 / 440	320 / 400	1105		
220 TRI	352 / 440	320 / 400	1155		
200/115	352 / 440	320 / 400	1270		



### 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.

**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 ESP/PRP 27 C°/40 C° Air Intlet Temp, 1000 m/1000 m m A.S.L. 60 % relative humidity.

Model	dB(A)@1m	dB(A)@7m	Dimensions	Weight	Tank
 M228-DW	79.7	70	Leng : 4527mm [178in] Widt : 1410mm [56in] Heig : 2700mm [106in]	4670kg [10296lbs] 5984kg [13192lbs]	1368 L
 M228	79.7	70	Leng : 4475mm [176in] Widt : 1410mm [56in] Heig : 2430mm [96in]	4320kg [9524lbs] 4790kg [10560lbs]	470 L



## ENGINE SPECIFICATIONS

DATA  GENERAL DATA	Motor model	VOLVO TAD1242GE , 4-temps, TURBO , AIR/AIR 6 X
	Cylinder arrangement	L
	Displacement (C.l.)	12.13
	Bore (mm) X Stroke (mm)	131 X 150
	Compression ratio	17.5 : 1
	Speed (RPM)	1500
	Pistons speed (m/s)	7.5
	Maximum stand-by power at rated RPM (kW)	387
	Frequency regulation (%)	0.5
	BMEP (bar)	23.21
	Governor type	ELEC
EXHAUST SYSTEM	Exhaust gas temperature (°F)	505
	Exhaust gas flow (L/s)	1050
	Max. exhaust back pressure (mm CE)	1000
FUEL SYSTEM	Consumption @ 110% load (L/h)	89.6
	Consumption @ 100% load (L/h)	81.5
	Consumption @ 75% load (L/h)	59.5
	Consumption @ 50% load (L/h)	40.5
	Maximum fuel pump flow (L/hr)	130
OIL	Oil capacity (L)	35
	Min. oil pressure (bar)	2.5
	Max. oil pressure (bar)	5.5
	Oil consumption 100% load (L/h)	0.12
	Carter oil capacity (L)	31
THERMAL BALANCE	Heat rejection to exhaust (kW)	250
	Radiated heat to ambient (kW)	17
	Heat rejection to coolant (kW)	123
AIR INTAKE	AIR INTAKE_entree_max%	500
	Intake air flow (L/s)	416
COOLANT SYSTEM	Radiator & Engine capacity (L)	44
	Max water temperature (°C)	103
	Outlet water temperature (°C)	93
	Fan power (kW)	11
	Fan air flow w/o restriction (m3/s)	8.5
	Available restriction on air flow (mm CE)	43
	Type of coolant	GLYCOL
	Thermostat (°C)	82-95
EMISSIONS	Emissions PM (g/kW.h)	N/A
	Emission CO (g/kW.h)	N/A
	Emissions HCNOx (g/kWh)	N/A
	Emission HC (g/kW.h)	N/A

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## ALTERNATOR SPECIFICATIONS

<b>DATA</b> <b>GENERAL DATA</b>	Alternator brand	LEROY SOMER
	Alternator	LSA472VS3
	Number of phase	3
	Power factor (Cos Phi)	0.8
	Altitude (m)	<1000
	Overspeed (rpm)	2250
	Number of pole	4
	Excitation system	SHUNT
	Insulation class / Temperature class	H / H
	Regulation	R230
	Total harmonics TGH/THC	<4
	Wave form : NEMA=TIF-TGH/THC	<50
	Wave form : CEI=FHT-TGH/THC	<2
	Number of bearing	1
	Coupling	DIRECT
	Voltage regulation 0 à 100%	0.5
	Recovery time (Delta U = 20% transitoire) (ms)	500
<b>OTHER</b> <b>DATA</b>	Continuous Nominal Rating 40°C (kVA)	400
	Standby Rating 27°C (kVA)	430
	Efficiencies 4/4 load (%)	93.1
	Air flow (m3/s)	0.9
	Short circuit ratio (Kcc)	0.29
	Direct axis synchro reactance unsaturated (Xd) (%)	393
	Quadra axis synchro reactance unsaturated (Xq) (%)	235
	Open circuit time constant (T'do) (ms)	1771
	Direct axis transient reactance saturated (X'd) (%)	22.1
	Short circuit transient time constant (T'd) (ms)	100
	Direct axis subtransient reactance saturated (X''d) (%)	17.7
	Subtransient time constant (T''d) (ms)	10
	Quadra axis subtransient reactance saturated (X''q) (%)	23.9
	Zero sequence reactance unsaturated (Xo) (%)	0.8
	Negative sequence reactance saturated (X2) (%)	20.9
	Armature time constant (Ta) (ms)	15
	No load excitation current (io) (ms)	0.9
	Full load excitation current (ic) (A)	3.9
	Full load excitation voltage (uc) (A)	39
	Recovery time (Delta U = 20% transitoire) (ms)	500
	Motor start (Delta U = 20% perm. or 50% trans.) (ms)	729
	Transient dip (4/4 charge) - PF : 0,8 AR (%)	17.6
No load losses (kW)	5.15	
Heat rejection (kW)	23.34	

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## CONTROL PANEL

### Standard



### TELYS

#### 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

#### 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...