

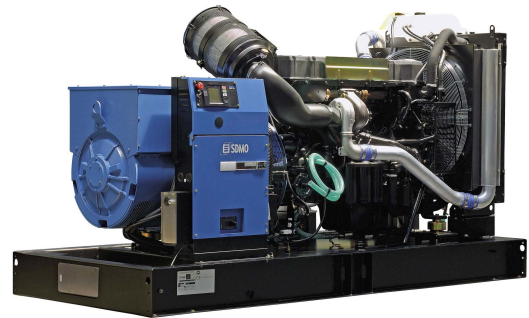
Model: V440C2

Engine: VOLVO, TAD1242GE

Alternator: LEROY SOMER, LSA472VS3

Specifications

- Compliant with stage 2 of the European pollutant emissions directive
- Electronic governor
- Mechanically welded chassis with anti-vibration 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



Generator Ratings

Voltage	Power ESP kW/kVA	Power RRP kW/kVA	Standby Amps	Dimensions	Weight
415/240	352 / 440	320 / 400	612	Length: 3160 Width: 1340 Height: 1805	3238kg Net 3718kg Gross
400/230	352 / 440	320 / 400	635		
380/220	352 / 440	316 / 395	661		
240/120	352 / 440	320 / 400	1059		
230/115	352 / 440	320 / 400	1105		
220/110	352 / 440	320 / 400	1155		
200/115	352 / 440	320 / 400	1270		

RRP: 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 12hour 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.

Terms of Use: Standard reference conditions 25 °C Air Inlet Temp, 100m A.S.L 60% relative humidity. All engine performance data based on the above mentioned continuous ratings.

Canopy Version

Type	dB(A)@7m	Dimensions	Weight	Tank
M228	70	Length: 4475 Width: 1410 Height: 2430	4320kg Net 4790kg Gross	470 L
M228-DW	70	Length: 4527 Width: 1410 Height: 2700	4670kg Net 5984kg Gross	1368 L

All units supplied with canopy as standard except when requested.

Engine Data

Manufacturer/Model	VOLVO TAD1242GE, 4-strokes, Turbo
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	1500 rpm
Piston speed	7.5m/s [24.6ft./s]
Max. standby power at rated RPM	387kW [519BHP]
Frequency regulation, steady state	+/- 0.5%
BMEP	23.9bar [346psi]
Governor: type	ELEC

Exhaust System

Exhaust temperature	505°C [941°F]
Exhaust gas flow	1050L/s [2225cfm]
Max back pressure	1000mm CE [39in. WG]

Fuel System

110% (Stand by power)	89.6L/h [23.7gal/hr]
100% (of the Prime Power)	81.5L/h [21.5gal/hr]
75% (of the Prime Power)	59.5L/h [15.7gal/hr]
50% (of the Prime Power)	40.5L/h [10.7gal/hr]
Total fuel flow	130L/h [34.3gal/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	0.12L/h [0.032gal/hr]
Oil capacity carter	31L [8.2gal]

Thermal balance 100% load

Heat rejection to exhaust	250kW [14215Btu/mn]
Radiated heat to ambient	17kW [967Btu/mn]
Heat rejection to coolant	123kW [6994Btu/mn]

Air intake

Max. intake restriction	500mm CE [20in. WG]
Engine air flow	416L/s [882cfm]

Coolant system

Radiator & engine capacity	44L [11.6gal]
Max water temperature	103°C [217°F]
Outlet water temperature	93°C [199°F]
Fan power	11 kW
Fan air flow w/o restriction	8.5m ³ /s [18012cfm]
Available restriction on air flow	43mm CE [1.7in. WG]
Type of coolant	Glycol-Ethylene
Thermostat	82-95 °C

Emissions

PM	23.7 mg/Nm ³
CO	256 mg/Nm ³
Nox	1800 mg/Nm ³
HC	23 mg/Nm ³

Alternator Specifications

Manufacturer/Type	LEROY 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	
TOTAL HARMONICS (TGH/THC)	< 4 %
WAVE FROM : NEMA = TIF- TGH/THC	< 50
WAVE FROM: 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 NORMAL SUSTAINED VOLTAGE (AT 0.4PF)	[N/A]

Other Alternator Data

CONTINUOUS NOMINAL RATING @ 40° C	400 kVA
STANDBY RATING @ 27° C	430 kVA
EFFICIENCIES @ 4/4 LOAD	93.1 %
AIR FLOW	0.9m ³ /s [1906.98cfm]
SHORT CIRCUIT RATIO: 50 (Kcc)	0.29
DIRECT AXIS SYNCHRO REACTANCE UNSATURATED (Xd)	393 %
QUADRA AXIS SYNCHRO REACTANCE UNSATURATED (Xq)	235 %
OPEN CIRCUIT TIME CONSTANT: 50 (T'do)	1771 ms
DIRECT AXIS TRANSIENT REACTANCE SATURATED (X'd)	22.1 %
SHORT CIRCUIT TRANSIENT TIME CONSTANT (T'd)	100 ms

Other Alternator Data Continued

DIRECT AXIS SUBTRANSIENT REACTANCE SATURATED (X'd)	17.7 %
SUBTRANSIENT TIME CONSTANT (T'd)	10 ms
QUADRA AXIS SUBTRANSIENT REACTANCE SATURATED (X'q)	23.9 %
ZERO SEQUENCE REACTACE UNSATURATED (X ₀)	0.8 %
NEGATIVE SEQUENCE REACTANCE SATURATED (X ₂)	20.9 %
ARMATURE TIME CONSTANT (T _a)	15 ms
NO LOAD EXCITATION CURRENT (i ₀)	0.9 A
FULL LOAD EXCITATION CURRENT (i _c)	3.9 A
FULL LOAD EXCITATION VOLTAGE (u _c)	39 V
RECOVERY TIME (DELTA U = 20% TRANSITOIRE)	500 ms
MOTOR START (DELTA = 20% PERM. OR 50% TRANS.)	729 kVA
TRANSIENT DIP (4/4 CHARGE) - PF : 1.8AR	17.6 %
NO LOAD LOSSES	5.15kW [5.15Kw]
HEAT REJECTION	23.34 kW