



## TM11.5K

## DIESEL GENSET

MODEL	TM11.5K
Stand-by Power @ 50Hz	9kW / 12 kVA
Prime Power @ 50Hz	8 kW / 10 kVA

### Standard Features

#### General features :

- Engine (MITSUBISHI , S3L2.SD )
- Charge alternator 12 V , Governor:Meca/Mechanical
- Alternator (MECC ALTE , ECO3-1L )
- 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
- 12 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	17	9 / 12	8 / 10
400/230	50	3	0.8	17	9 / 12	8 / 10
380/220	50	3	0.8	18	9 / 12	8 / 10
240/120	50	3	0.8	29	9 / 12	8 / 10
230/115	50	3	0.8	30	9 / 12	8 / 10
220/110	50	3	0.8	31	9 / 12	8 / 10
220/127	50	3	0.8	26	8 / 10	7 / 9
200/115	50	3	0.8	35	9 / 12	8 / 10

Stand-By ratings are available for the duration of any power outage. No overload capacity is specified at this ratings. Prime ratings are available per BS 5514, DIN 6271, ISO-3046 and IEC 34-1 with 10% overload capacity one hour in twelve hours.

### 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.
- Two years limited warranty , please refer to the conditions terms . Five years extended are also available.





## ENGINE DATA

Manufacturer / Model	MITSUBISHI S3L2.SD , 4-cycle, Athmo , N/A
Cylinder Arrangement	3 X L
Displacement	1.31L [79.9C.I.]
Bore and Stroke	78mm [3.1in.] X 92mm [3.6in.]
Compression ratio	22 : 1
Rated RPM	1500 Rpm
Piston Speed	4.6m/s [15.1ft./s]
Max. stand by Power at rated RPM	11.33kW [15BHP]
Frequency regulation, steady state	+/-2. 5%
BMEP	6.24bar [90psi]
Governor : type	Meca/Mechanical

### Exhaust System

Exhaust gas flow	36.5L/s [77cfm]
Exhaust temperature	400°C [752°F]
Max back pressure	700mm CE [28in. WG]

### Fuel System

110% (Stand By power )	N/A
100% (of the Prime Power)	3.1L/h [0.8gal/hr]
75% (of the Prime Power)	2.5L/h [0.7gal/hr]
50% (of the Prime Power)	2.1L/h [0.6gal/hr]
Total fuel flow	18L/h [4.8gal/hr]

### Oil System

Total oil capacity w/filters	4.2L [1.1gal]
Oil Pressure low idle	0.5bar [7.2psi]
Oil Pressure rated RPM	4bar [58.0psi]
Oil consumption 100% load	0.018L/h [0.0gal/hr]
Oil capacity carter	3.7L [1.0gal]

### Thermal balance 100% load

Heat rejection to exhaust	10kW [569Btu/mn]
Radiated heat to ambient	1kW [57Btu/mn]
Heat rejection to coolant	9.8kW [557Btu/mn]

### Air intake

Max. intake restriction	200mm CE [8in. WG]
Engine air flow	13.6L/s [29cfm]

### Coolant System

Radiator & engine capacity	4.2L [1.1gal]
Max water temperature	111°C [232°F]
Outlet water temperature	93°C [199°F]
Fan power	0.3 kW
Fan air flow	0.5m3/s [1060cfm]
Available restriction on air flow	10mm CE [0.4in. WG]
Type of coolant	Gencool
Thermostat	82-95 °C

### Emissions

HC	50 mg/Nm3
CO	140 mg/Nm3
Nox	1500 mg/Nm3
PM	80 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	MECC ALTE ECO3-1L
Number of phase	3
Power factor (Cos Phi)	0.8
Altitude	1000
Overspeed	rpm
Pole : number	4
Exciter type	No
Insulation : class, temperature rise	H / H
Voltage regulator	SR7/2
Sustained short circuit current	
Total harmonics (TGH/THC)	
Wave form : NEMA = TIF – TGH/THC	
Wave form : CEI = FHT – TGH/THC	
Bearing : number	1
Coupling	Direct
Voltage regulation 0 to 100% load	
Recovery time (20% Volt dip) ms	ms
SkVA with 90 % of nominal sustained voltage (at 0.4 PF)	N/A

### OTHER ALTERNATOR DATA

Continuous nominal rating @ 40°C	13.2 kVA
Standby rating @ 27°C	14.4 kVA
Efficiencies @ 4/4 load	86.8 %
Air flow	4m3/s [8475.48cfm]
Short circuit ratio;50 (Kcc)	0.85
Direct axis synchro reactance unsaturated (Xd)	222 %
Quadra axis synchro reactance unsaturated (Xq)	71 %
Open circuit time constant;50 (T'do)	0.82 ms
Direct axis transient reactance saturated (X'd)	22.2 %
Short circuit transient time constant (T'd)	38 ms
Direct axis subtransient reactance saturated (X''d)	15.7 %
Subtransient time constant (T''d)	14 ms
Quadra axis subtransient reactance saturated (X''q)	82.5 %
Zero sequence reactance unsaturated (Xo)	6.2 %
Negative sequence reactance saturated (X2)	18.9 %
Armature time constant (Ta)	48 ms
No load excitation current (io)	A
Full load excitation current (ic)	A
Full load excitation voltage (uc)	V
Recovery time (Delta U = 20% transitoire)	ms
Motor start (Delta = 20% perm. Or 50% trans.)	kVA
Transient dip (4/4 charge) – PF : 1.8 AR	%
No load losses	kW
Heat rejection	kW



<i>Control Panels</i>
-----------------------

N/A

N/A

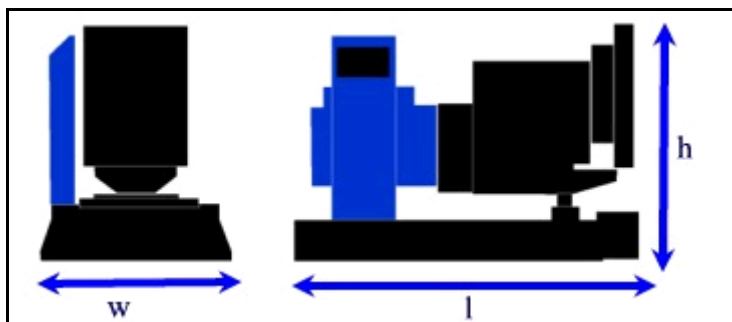
N/A

## Options

<b>Engine and Radiator</b> <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>	<b>Alternator</b> <ul style="list-style-type: none"> <li>Anti condensation heater</li> <li>Enforced impregnation</li> <li>Oversized alternator</li> </ul>	<b>Control panel</b> <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>
	<b>Exhaust</b> <ul style="list-style-type: none"> <li>Residential silencer</li> <li>Critical silencer</li> <li>Flexible exhaust conn.</li> </ul>	<b>Literature</b> <ul style="list-style-type: none"> <li>Parts</li> <li>Maintenance</li> </ul>
<b>Fuel</b> <ul style="list-style-type: none"> <li>Day tank</li> <li>Subbase fuel tanks UL</li> <li>Water separator fuel filter</li> </ul>	<b>Enclosure M126</b> <ul style="list-style-type: none"> <li>Silent 60.4 db @ 23 Ft (stby)</li> </ul>	

## Weight and Dimensions

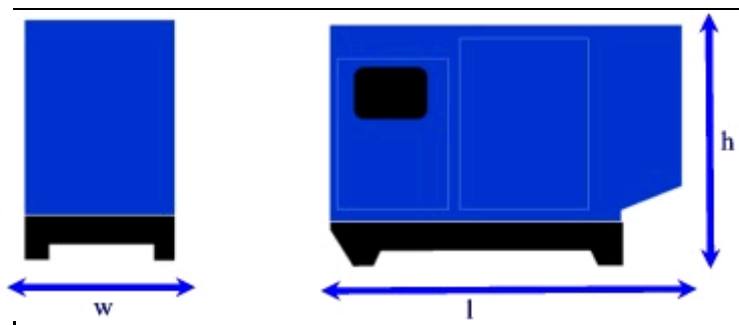
### Open Model



Overall size l x w x h :  
1405mm [55in] x 715mm [28in] x 1053mm [41in]

Weight :  
387kg [853lbs] Net 438kg [965lbs] Brut

### With Optional Enclosure



Overall size l x w x h :  
1750mm [69in] x 715mm [28in] x 1230mm [48in]

Weight :  
535kg [1179lbs] Net 586kg [1292lbs] Brut



**SDMO industries** - Head Office – 12bis, rue de la Villeneuve – CS 92848 - 29228 BREST cedex 2 - FRANCE -  
[www.sdmo.com](http://www.sdmo.com)