



T16K

DIESEL GENSET

MODEL	T16K
Stand-by Power @ 50Hz	13kW / 16 kVA
Prime Power @ 50Hz	12 kW / 15 kVA

Standard Features

General features :

- Engine (MITSUBISHI , S4L2.SD)
- Charge alternator 12 V , Governor:Meca
- Alternator (MECC ALTE , ECO28S)
- 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	22	13 / 16	12 / 15
400/230	50	3	0.8	23	13 / 16	12 / 15
380/220	50	3	0.8	24	13 / 16	12 / 15
240/120	50	3	0.8	38	13 / 16	12 / 15
230/115	50	3	0.8	40	13 / 16	12 / 15
220/110	50	3	0.8	42	13 / 16	12 / 15
220/127	50	3	0.8	37	11 / 14	10 / 12
200/115	50	3	0.8	46	13 / 16	12 / 15

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	MITSUBISHI S4L2.SD , 4-cycle, Athmo , N/A
Cylinder Arrangement	4 X L
Displacement	1.75L [106.8C.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	16.61kW [22BHP]
Frequency regulation, steady state	+/-2. 5%
BMEP	6.86bar [99psi]
Governor : type	Meca

Exhaust System

Exhaust gas flow	48.7L/s [103cfm]
Exhaust temperature	410°C [770°F]
Max back pressure	700mm CE [28in. WG]

Fuel System

110% (Stand By power)	N/A
100% (of the Prime Power)	4.4L/h [1.2gal/hr]
75% (of the Prime Power)	3.4L/h [0.9gal/hr]
50% (of the Prime Power)	2.6L/h [0.7gal/hr]
Total fuel flow	18L/h [4.8gal/hr]

Oil System

Total oil capacity w/filters	5.9L [1.6gal]
Oil Pressure low idle	1bar [14.5psi]
Oil Pressure rated RPM	4bar [58.0psi]
Oil consumption 100% load	0.025L/h [0.0gal/hr]
Oil capacity carter	5.4L [1.4gal]

Thermal balance 100% load

Heat rejection to exhaust	14kW [796Btu/mn]
Radiated heat to ambient	2kW [114Btu/mn]
Heat rejection to coolant	14kW [796Btu/mn]

Air intake

Max. intake restriction	200mm CE [8in. WG]
Engine air flow	18.2L/s [39cfm]

Coolant System

Radiator & engine capacity	4.9L [1.3gal]
Max water temperature	111°C [232°F]
Outlet water temperature	93°C [199°F]
Fan power	0.5 kW
Fan air flow	0.8m ³ /s [1695cfm]
Available restriction on air flow	10mm CE [0.4in. WG]
Type of coolant	Gencool
Thermostat	82-95 °C

Emissions

HC	40 mg/Nm ³
CO	120 mg/Nm ³
Nox	1350 mg/Nm ³
PM	100 mg/Nm ³



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 ECO28S
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	AVR
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	kVA
Standby rating @ 27°C	20 kVA
Efficiencies @ 4/4 load	83.3 %
Air flow	5.5m3/s [11653.79cfm]
Short circuit ratio;50 (Kcc)	0.67
Direct axis synchro reactance unsaturated (Xd)	196 %
Quadra axis synchro reactance unsaturated (Xq)	72 %
Open circuit time constant;50 (T'do)	0.9 ms
Direct axis transient reactance saturated (X'd)	16.9 %
Short circuit transient time constant (T'd)	0.051 ms
Direct axis subtransient reactance saturated (X''d)	11.5 %
Subtransient time constant (T''d)	0.018 ms
Quadra axis subtransient reactance saturated (X''q)	24 %
Zero sequence reactance unsaturated (Xo)	3.6 %
Negative sequence reactance saturated (X2)	17 %
Armature time constant (Ta)	0.016 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

Control Panels

NEXYS



Specifications :

- Frequency meter, Ammeter, Voltmeter
- Alarms and faults Oil pressure, water temperature, Overcrank, Overspeed (>60 kVA), Min/max alternator, Low fuel level, Emergency stop
- Engine parameters Hours counter, Engine speed, Battery voltage, Fuel level, Air preheating

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

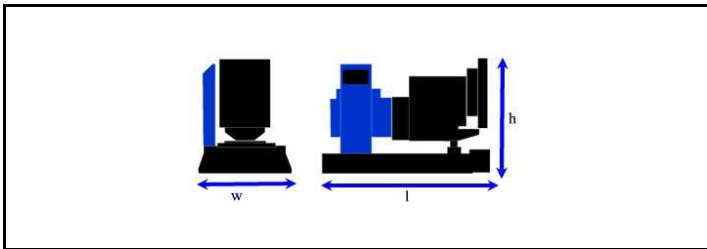


Options

Engine and Radiator	Alternator	Control panel
<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 	<ul style="list-style-type: none"> Anti condensation heater Enforced impregnation Oversized alternator 	<ul style="list-style-type: none"> NFPA 110 level 1 Paralleling system Remote annunciator Oil temperature shutdown Key start panel
	Exhaust	Literature
	<ul style="list-style-type: none"> Residential silencer Critical silencer Flexible exhaust conn. 	<ul style="list-style-type: none"> Parts Maintenance
Fuel	Enclosure	
<ul style="list-style-type: none"> Day tank Subbase fuel tanks UL Water separator fuel filter 	<ul style="list-style-type: none"> M126 Silent 60.7 db @ 7m [23 Ft] (stby) 	

Weight and Dimensions

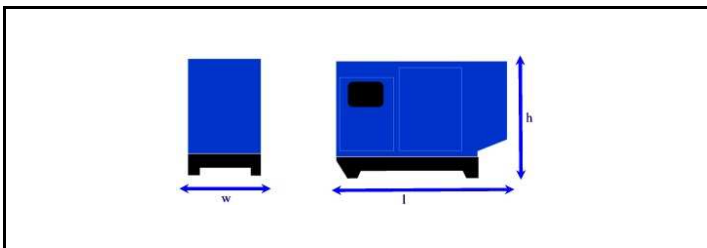
Open Model Excluding option



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

Weight :
427kg [941lbs] Net 481kg [1060lbs] Brut

With Optional Enclosure



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

Weight :
575kg [1267lbs] Net 629kg [1386lbs] Brut

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