



T20HK

DIESEL GENSET

MODEL	T20HK
Stand-by Power @ 50Hz	16kW / 20 kVA
Prime Power @ 50Hz	- kW / - kVA

Standard Features

General features :

- Engine (MITSUBISHI , S3L2.SDH)
- Charge alternator 12 V , Governor:Meca
- Alternator (MECC ALTE , ECO3-2L)
- 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	28	16 / 20	- / -
400/230	50	3	0.8	29	16 / 20	- / -
380/220	50	3	0.8	30	16 / 20	- / -
240/120	50	3	0.8	48	16 / 20	- / -
230/115	50	3	0.8	50	16 / 20	- / -
220/110	50	3	0.8	52	16 / 20	- / -
220/127	50	3	0.8	45	14 / 17	- / -
200/115	50	3	0.8	58	16 / 20	- / -

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 S3L2.SDH , 4-cycle, Athmo , N/A
Cylinder Arrangement	3 X L
Displacement	1.318L [80.4C.I.]
Bore and Stroke	78mm [3.1in.] X 92mm [3.6in.]
Compression ratio	22 : 1
Rated RPM	3000 Rpm
Piston Speed	9.2m/s [30.2ft./s]
Max. stand by Power at rated RPM	20.9kW [28BHP]
Frequency regulation, steady state	+/-2. 5%
BMEP	5.76bar [83psi]
Governor : type	Meca

Exhaust System

Exhaust gas flow	73.1L/s [155cfm]
Exhaust temperature	530°C [986°F]
Max back pressure	700mm CE [28in. WG]

Fuel System

110% (Stand By power)	N/A
100% (of the Prime Power)	6.7L/h [1.8gal/hr]
75% (of the Prime Power)	5.5L/h [1.5gal/hr]
50% (of the Prime Power)	4.1L/h [1.1gal/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	0.036L/h [0.0gal/hr]
Oil capacity carter	3.7L [1.0gal]

Thermal balance 100% load

Heat rejection to exhaust	20kW [1137Btu/mn]
Radiated heat to ambient	2kW [114Btu/mn]
Heat rejection to coolant	21.5kW [1222Btu/mn]

Air intake

Max. intake restriction	310mm CE [12in. WG]
Engine air flow	27.3L/s [58cfm]

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	1.5 kW
Fan air flow	1.1m ³ /s [2331cfm]
Available restriction on air flow	10mm CE [0.4in. WG]
Type of coolant	Gencool
Thermostat	82-95 °C

Emissions

HC	50 mg/Nm ³
CO	120 mg/Nm ³
Nox	1330 mg/Nm ³
PM	50 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 ECO3-2L
Number of phase	3
Power factor (Cos Phi)	0.8
Altitude	1000
Overspeed	rpm
Pole : number	2
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	22.8 kVA
Standby rating @ 27°C	23 kVA
Efficiencies @ 4/4 load	86.7 %
Air flow	6.8m3/s [14408.32cfm]
Short circuit ratio;50 (Kcc)	0.63
Direct axis synchro reactance unsaturated (Xd)	193 %
Quadra axis synchro reactance unsaturated (Xq)	101 %
Open circuit time constant;50 (T'do)	0.7 ms
Direct axis transient reactance saturated (X'd)	26.6 %
Short circuit transient time constant (T'd)	55 ms
Direct axis subtransient reactance saturated (X''d)	14.5 %
Subtransient time constant (T''d)	11 ms
Quadra axis subtransient reactance saturated (X''q)	36.5 %
Zero sequence reactance unsaturated (Xo)	5.5 %
Negative sequence reactance saturated (X2)	17.8 %
Armature time constant (Ta)	10 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

- Heat shield protection
- Oil drain extension
- Heavy duty air filter
- Lube oil drain pump
- Radiator core guard
- Battery charger
- Block heater

Alternator

- Anti condensation heater
- Enforced impregnation
- Oversized alternator

Control panel

- NFPA 110 level 1
- Paralleling system
- Remote annunciator
- Oil temperature shutdown

Exhaust

- Residential silencer
- Critical silencer
- Flexible exhaust conn.

Literature

- Parts
- Maintenance

Fuel

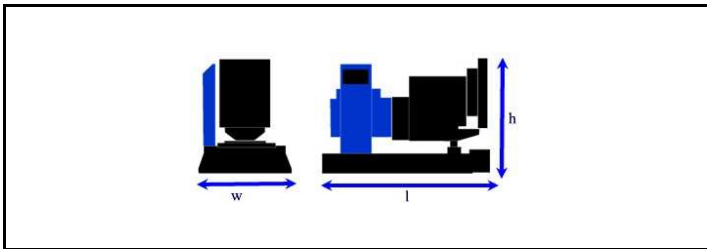
- Day tank
- Subbase fuel tanks UL
- Water separator fuel filter

Enclosure

- M126
- Silent 68.4 db @ 7m [23 Ft] (stby)

Weight and Dimensions

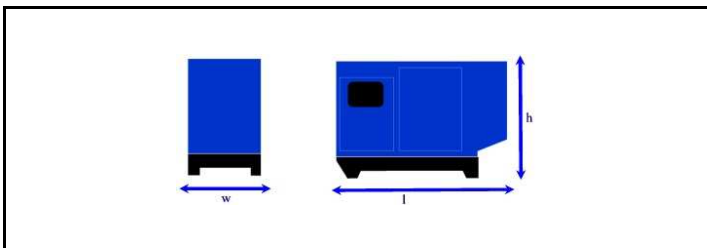
Open Model Excluding option



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

Weight :
386kg [851lbs] Net 437kg [963lbs] Brut

With Optional Enclosure



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

Weight :
534kg [1177lbs] Net 585kg [1289lbs] Brut