

# T20UM

Engine MITSUBISHI , S4Q2-SD  
Alternator MECC ALTE , ECO28VL

## STANDARD FEATURES

- Mechanical governor
- Mechanically welded chassis with antivibration 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
- 12 V charging alternator and starter
- Supplied with oil and coolant -30°C
- User manual and commissioning guide



Voltage	Power ESP kWe/kVA	Power PRP kWe/kVA	Standby Amps	Dimensions	Weight
240MONO	20.0 / 20.0	18.2 / 18.2	83.3	Length: 1700mm [67in] Width: 896mm [35in] Height: 1121mm [44in]	580kg [1279 lbs] Net 680kg [1499 lbs] Gross



## 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. 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.

## TERM OF USE

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

Type	dB(A)@1m	dB(A)@7m	Dimensions	Weight	Tank
 M127	75	65.4	Length: 2080mm [82in] Width: 960mm [38in] Height: 1415mm [56in]	810kg [1786lbs] Net 910kg [2006lbs] Gross	100 L
 M127-DW	75	65.4	Length: 2160mm [85in] Width: 966mm [38in] Height: 1582mm [62in]	991kg [2185lbs] Net 1221kg [2692lbs] Gross	230 L





## ENGINE SPECIFICATIONS

STANDARD FEATURES	Manufacturer / Model	MITSUBISHI S4Q2-SD , 4-strokes, Athmo , [N/A] 4 X
	Cylinder Arrangement	L
	Displacement	2.50L [152.6C.I.]
	Bore and Stroke	88mm [3.5in.] X 103mm [4.1in.]
	Compression ratio	22 : 1
	Rated RPM	1800 Rpm
	Piston Speed	6.18m/s [20.3ft./s]
	Max. stand by Power at rated RPM	28.71kW [38BHP]
	Frequency regulation, steady state	+/- 2.5%
	BMEP	6.94bar [101psi]
Governor : type	MECA	
EXHAUST SYSTEM	Exhaust temperature	600°C [1112°F]
	Exhaust gas flow	89L/s [189cfm]
	Max back pressure	680mm CE [27in. WG]
FUEL SYSTEM	110% (Stand By power )	8.1L/h [2.1gal/hr]
	100% (of the Prime Power)	7.4L/h [2.0gal/hr]
	75% (of the Prime Power)	5.6L/h [1.5gal/hr]
	50% (of the Prime Power)	4.1L/h [1.1gal/hr]
	Max. fuel pump flow	36L/h [9.5gal/hr]
OIL SYSTEM	Total oil capacity w/filters	6.5L [1.7gal]
	Oil Pressure low idle	1bar [14.5psi]
	Oil Pressure rated RPM	5bar [72.5psi]
	Oil consumption 100% load	0.08L/h [0.021gal/hr]
	Oil capacity carter	5.5L [1.5gal]
THERMAL BALANCE	Heat rejection to exhaust	25kW [1422Btu/mn]
	Radiated heat to ambient	3kW [171Btu/mn]
	Heat rejection to coolant	23kW [1308Btu/mn]
AIR INTAKE	Max. intake restriction	200mm CE [8in. WG]
	Engine air flow	34L/s [72cfm]
COOLANT SYSTEM	Radiator & engine capacity	8.1L [2.1gal]
	Max water temperature	111°C [232°F]
	Outlet water temperature	93°C [199°F]
	Fan power	1.2 kW
	Fan air flow w/o restriction	1m3/s [2119cfm]
	Available restriction on air flow	10mm CE [0.4in. WG]
	Type of coolant	Gencool
	Thermostat	76.5-90 °C
EMISSIONS LEVEL	PM	N/A
	CO	N/A
	Nox	N/A
	HC	N/A





## ALTERNATOR SPECIFICATIONS

GENERAL  DATAS	Manufacturer	MECC ALTE
	Type	ECO28VL
	Number of phase	1
	Power factor (Cos Phi)	1
	Altitude	1000
	Overspeed	[N/A]
	Pole : number	4
	Exciter type	NO
	Insulation : class, temperature rise	H / H
	Voltage regulator	SR7/2
	Total harmonics (TGH/THC)	[N/A]
	Wave form : NEMA = TIF – TGH/THC	[N/A]
	Wave form : CEI = FHT – TGH/THC	2
	Bearing : number	1
	Coupling	Direct
	Voltage regulation 0 to 100% load	[N/A]
	Recovery time (20% Volt dip) ms	[N/A]
SKVA with 90% of nominal sustained voltage (at 0.4PF)	N/A	
OTHER  DATAS	Continuous nominal rating @ 40°C	24 kVA
	Standby rating @ 27°C	24 kVA
	Efficiencies @ 4/4 load	86.5 %
	Air flow	0.096m <sup>3</sup> /s [203.41cfm]
	Short circuit ratio;50 (Kcc)	0.62
	Direct axis synchro reactance unsaturated (Xd)	165 %
	Quadra axis synchro reactance unsaturated (Xq)	71 %
	Open circuit time constant;50 (T'do)	0.93 ms
	Direct axis transient reactance saturated (X'd)	15.4 %
	Short circuit transient time constant (T'd)	46 ms
	Direct axis subtransient reactance saturated (X''d)	8.8 %
	Subtransient time constant (T''d)	12 ms
	Quadra axis subtransient reactance saturated (X''q)	19 %
	Zero sequence reactance unsaturated (Xo)	2.8 %
	Negative sequence reactance saturated (X2)	13.2 %
	Armature time constant (Ta)	11 ms
	No load excitation current (io)	[N/A]
	Full load excitation current (ic)	[N/A]
	Full load excitation voltage (uc)	[N/A]
	Recovery time (Delta U = 20% transitoire)	[N/A]
	Motor start (Delta = 20% perm. Or 50% trans.)	[N/A]
	Transient dip (4/4 charge) – PF : 1.8 AR	[N/A]
	No load losses	[N/A]
Heat rejection	[N/A]	



## CONTROL PANEL

### Standard



### 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

### Option



### 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

