



# R1540

Engine MITSUBISHI , S12R-PTA2  
 Alternator LEROY SOMER , LSA50.1L8

## STANDARD FEATURES

- Connection terminal block "rental type"
- Bulk tank
- Water separator pre-filter
- Voltage adjustment
- Drainage pump
- Fork lift
- Battery isolating switch
- 3 track valves
- Emergency lighting/Shut-off valve
- Rental specific soundproofed contenergy



Voltage	Power ESP kWe/kVA	Power PRP kWe/kVA	Standby Amps
415/240	1232 / 1540	1120 / 1400	2143



## 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 40 °C Air Intlet Temp, 1500 m A.S.L. 60 % relative humidity. All engine performance data based on the above mentioned maximum continuous ratings.

Silent	Type	dB(A)@1m	dB(A)@7m	Dimensions	Weight	Tank
	ISO20 Si	89	79	Long: 6058mm [239in] Wide: 2438mm [96in] Height: 2896mm [114in]	15775kg [34768lbs] Net 17834kg [39306lbs] Gross	1500 L
Super Silent	Type	dB(A)@1m	dB(A)@7m	Dimensions	Weight	Tank
	CIR20	84	74	Long: 6058mm [239in] Wide: 2438mm [96in] Height: 2896mm [114in]	17446kg [38451lbs] Net 19669kg [43350lbs] Gross	2000 L



## ENGINE SPECIFICATIONS

STANDARD FEATURES	Manufacturer / Model	MITSUBISHI S12R-PTA2 , 4-strokes, Turbo , N/A 12 X
	Cylinder Arrangement	V
	Displacement	49.03L [2992.0C.I.]
	Bore and Stroke	180mm [7.1in.] X 170mm [6.7in.]
	Compression ratio	14.0:1
	Rated RPM	1500 Rpm
	Piston Speed	9m/s [29.5ft./s]
	Max. stand by Power at rated RPM	1315kW [1762BHP]
	Frequency regulation, steady state	+/-0. 25%
	BMEP	19.9bar [288psi]
Governor : type	Elec	
EXHAUST SYSTEM	Exhaust gas flow	520°C [968°F]
	Exhaust temperature	4216L/s [8934cfm]
	Max back pressure	600mm CE [24in. WG]
FUEL SYSTEM	110% (Stand By power )	321L/h [84.8gal/hr]
	100% (of the Prime Power)	288L/h [76.1gal/hr]
	75% (of the Prime Power)	218L/h [57.6gal/hr]
	50% (of the Prime Power)	155L/h [41.0gal/hr]
	Max. fuel pump flow	588L/h [155.3gal/hr]
OIL SYSTEM	Total oil capacity w/filters	180L [47.6gal]
	Oil Pressure low idle	2.5bar [36.2psi]
	Oil Pressure rated RPM	5.8bar [84.0psi]
	Oil consumption 100% load	1L/h [0.3gal/hr]
	Oil capacity carter	150L [39.6gal]
THERMAL BALANCE	Heat rejection to exhaust	816kW [46398Btu/mn]
	Radiated heat to ambient	84kW [4776Btu/mn]
	Heat rejection to coolant	698kW [39688Btu/mn]
AIR INTAKE	Max. intake restriction	400mm CE [16in. WG]
	Engine air flow	1600L/s [3391cfm]
COOLANT SYSTEM	Radiator & engine capacity	300L [79.3gal]
	Max water temperature	98°C [208°F]
	Outlet water temperature	95°C [203°F]
	Fan power	30 kW
	Fan air flow w/o restriction	25.9m3/s [54884cfm]
	Available restriction on air flow	20mm CE [0.8in. WG]
	Type of coolant	Gencool
	Thermostat	82-94 °C
GAS SYSTEM	HC	110 mg/Nm3
	CO	590 mg/Nm3
	Nox	3900 mg/Nm3
	PM	100 mg/Nm3



## ALTERNATOR SPECIFICATIONS

GENERAL  DATAS	Manufacturer / Type	LEROY SOMER LSA50.1L8
	Number of phase	3
	Power factor (Cos Phi)	0.8
	Altitude	< 1000 m
	Overspeed	2250 rpm
	Pole : number	4
	Exciter type	AREP
	Insulation : class, temperature rise	H / H
	Voltage regulator	R449
	Sustained short circuit current	5 AC
	Total harmonics (TGH/THC)	< 4%
	Wave form : NEMA = TIF – TGH/THC	< 50
	Wave form : CEI = FHT – TGH/THC	< 2%
	Bearing : number	1
	Coupling	Direct
	Voltage regulation 0 to 100% load	+/- 1%
	Recovery time (20% Volt dip) ms	< 500 ms
SkVA with 90% of nominal sustained voltage (at 0.4PF)	N/A	
OTHER  DATAS	Continuous nominal rating @ 40°C	1425 kVA
	Standby rating @ 27°C	1570 kVA
	Efficiencies @ 4/4 load	95.1 %
	Air flow	1.6m <sup>3</sup> /s [3390.19cfm]
	Short circuit ratio;50 (Kcc)	0.37
	Direct axis synchro reactance unsaturated (Xd)	353 %
	Quadra axis synchro reactance unsaturated (Xq)	212 %
	Open circuit time constant;50 (T'do)	2720 ms
	Direct axis transient reactance saturated (X'd)	24.6 %
	Short circuit transient time constant (T'd)	222 ms
	Direct axis subtransient reactance saturated (X''d)	13.5 %
	Subtransient time constant (T''d)	20 ms
	Quadra axis subtransient reactance saturated (X''q)	16.9 %
	Zero sequence reactance unsaturated (Xo)	3.3 %
	Negative sequence reactance saturated (X2)	15.2 %
	Armature time constant (Ta)	41 ms
	No load excitation current (io)	1.3 A
	Full load excitation current (ic)	N/A
	Full load excitation voltage (uc)	63 V
	Recovery time (Delta U = 20% transitoire)	< 500 ms
Motor start (Delta = 20% perm. Or 50% trans.)	2850 kVA	
Transient dip (4/4 charge) – PF : 1.8 AR	12.5 %	
No load losses	15kW [15.00Kw]	
Heat rejection	54 kW	

## CONTROL PANEL

### Standard



### 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

### Option



### KERYS

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
- Additional specifications Website, Troubleshooting, Assistance and Maintenance, Plotting and logging, Load impact, 8 configurations available, Compliance with international standards...