

**Model: T1900**

**Engine: MITSUBISHI, S16R-PTA**

**Alternator: LEROY SOMER, LSA512S55**

## Specifications

- Electronic governor
- Mechanically welded chassis with anti-vibration suspension
- Radiator for wiring T° of 50°C [122°F] max with mechanical fan
- Protective grille for fan and rotating parts
- Exhaust outlet with flexible and flanges
- 24 V charging alternator and starter
- Supplied with oil and coolant -30°C
- User manual and commissioning guide



## Generator Ratings

Voltage	Power ESP kW/kVA	Power RRP kW/kVA	Standby Amps	Dimensions	Weight
415/240	1520/1900	1382/1727	2643	Length: 5497 Width: 2286 Height: 2479	12891kg Net 13516kg Gross
400/230	1520/1900	1382/1727	2742		
380/220	1520/1900	1382/1727	2887		

**RRP:** 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 12hour 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.

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

## Canopy Version

Type	dB(A)@7m	Dimensions	Weight	Tank
ISO40	79	Length: 12192 Width: 2438 Height: 2896	19962kg Net 20939kg Gross	500L

All units supplied with canopy as standard except when requested.

### Engine Data

Manufacturer/Model	mitsubishi S16R-PTA, 4-strokes, Turbo
Cylinder arrangement	16 x V
Displacement	65.37L [3989.1C.I.]
Bore and stroke	170mm [6.7in.] X 180mm [7.1in.]
Compression ratio	14 : 1
Rated RPM	1500 Rpm
Piston speed	9m/s [29.5ft./s]
Max. standby power at rated RPM	1620kW [2171BHP]
Frequency regulation, steady state	+/- 0.25%
BMEP	18.5bar [268psi]
Governor: type	ELEC

### Exhaust System

Exhaust temperature	539°C [1002°F]
Exhaust gas flow	5150L/s [10913cfm]
Max back pressure	600mm CE [24in. WG]

### Fuel System

110% (Stand by power)	388L/h [102.5gal/hr]
100% (of the Prime Power)	353L/h [93.3gal/hr]
75% (of the Prime Power)	266L/h [70.3gal/hr]
50% (of the Prime Power)	188L/h [49.7gal/hr]
Total fuel flow	588L/h [155.3gal/hr]

### Oil System

Total oil capacity w/filters	230L [60.8gal]
Oil Pressure low idle	2.5bar [36.2psi]
Oil Pressure rated RPM	5.8bar [84.0psi]
Oil consumption 100% load	1.32L/h [0.349gal/hr]
Oil capacity carter	140L [37.0gal]

## Thermal balance 100% load

Heat rejection to exhaust	977kW [55552Btu/mn]
Radiated heat to ambient	102kW [5800Btu/mn]
Heat rejection to coolant	852kW [48445Btu/mn]

## Air intake

Max. intake restriction	400mm CE [16in. WG]
Engine air flow	1950L/s [4132cfm]

## Coolant system

Radiator & engine capacity	345L [91.1gal]
Max water temperature	98°C [208°F]
Outlet water temperature	95°C [203°F]
Fan power	40.2 kW
Fan air flow w/o restriction	33.5m <sup>3</sup> /s [70989cfm]
Available restriction on air flow	20mm CE [0.8in. WG]
Type of coolant	Gencool
Thermostat	82-94 °C

## Emissions

PM	110 mg/Nm <sup>3</sup>
CO	560 mg/Nm <sup>3</sup>
Nox	3800 mg/Nm <sup>3</sup>
HC	100 mg/Nm <sup>3</sup>

## Alternator Specifications

Manufacturer/Type	LEROY SOMER (LSA512S55)
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

## Alternator Specifications Continued

SUSTAINED SHORT CIRCUIT CURRENT	[N/A]
TOTAL HARMONICS (TGH/THC)	< 4 %
WAVE FROM : NEMA = TIF- TGH/THC	< 50
WAVE FROM: CEI = FHT - TGH/THC	< 2%
BEARING: NUMBER	1
COUPLING	Direct
VOLTAGE REGULATION 0 TO 100% LOAD	+/- 1%
RECOVERY TIME (20% VOLT DIP) MS	< 700 ms
SKVA WITH 90% OF NORMAL SUSTAINED VOLTAGE (AT 0.4PF)	[N/A]

## Other Alternator Data

CONTINUOUS NOMINAL RATING @ 40° C	1860 kVA
STANDBY RATING @ 27° C	2045 kVA
EFFICIENCIES @ 4/4 LOAD	95.6 %
AIR FLOW	2.5m <sup>3</sup> /s [5297.18cfm]
SHORT CIRCUIT RATIO: 50 (Kcc)	0.33
DIRECT AXIS SYNCHRO REACTANCE UNSATURATED (Xd)	374 %
QUADRA AXIS SYNCHRO REACTANCE UNSATURATED (Xq)	224 %
OPEN CIRCUIT TIME CONSTANT: 50 (T'do)	2700 ms
DIRECT AXIS TRANSIENT REACTANCE SATURATED (X'd)	33.4 %
SHORT CIRCUIT TRANSIENT TIME CONSTANT (T'd)	240 ms
DIRECT AXIS SUBTRANSIENT REACTANCE SATURATED (X'd)	14.8 %
SUBTRANSIENT TIME CONSTANT (T'd)	22 ms
QUADRA AXIS SUBTRANSIENT REACTANCE SATURATED (X'q)	18.4 %
ZERO SEQUENCE REACTANCE UNSATURATED (Xo)	3.5 %
NEGATIVE SEQUENCE REACTANCE SATURATED (X2)	16.6 %
ARMATURE TIME CONSTANT (Ta)	39 ms
NO LOAD EXCITATION CURRENT (io)	1.5 A

## Other Alternator Data Continued

FULL LOAD EXCITATION CURRENT (ic)	6 A
FULL LOAD EXCITATION VOLTAGE (uc)	63 V
RECOVERY TIME (DELTA U = 20% TRANSITOIRE)	< 700 ms
MOTOR START (DELTA = 20% PERM. OR 50% TRANS.)	3600 kVA
TRANSIENT DIP (4/4 CHARGE) - PF : 1.8AR	1.8 AR 12 %
NO LOAD LOSSES	16kW [16.00Kw]
HEAT REJECTION	64.7 kW