# R16C

Engine MITSUBISHI , S4L2-SD
Alternator LEROY SOMER , LSA422S4

## STANDARD FEATURES

- Analog engine
- Simplified connection terminal block
- Four-pole breaker
- Central lifting ring
- Rental specific soundproofed canopy
- Diesel low level
- AREP Leroy-Somer Alternator
- Easy radiator access
- Rain cap


| Voltage | Power ESP kWe/kVA | Power PRP kWe/kVA | Standby Amps |
|---|---|---|---|
| 400/230 | 13 / 16 | 12 / 15 | 23 |

## 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 Intlet 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 |
|---|---|---|---|---|---|---|
|  | M126-DW | 70.7 | 60.7 | Long: 1797mm [71in]<br>Wide: 775mm [31in]<br>Height: 1391mm [55in] | 672kg [lbs]<br>Net<br>762kg [lbs]<br>Gross | 93 L |
|  | M126 | 70.7 | 60.7 | Long: 1750mm [69in]<br>Wide: 715mm [28in]<br>Height: 1230mm [48in] | 610kg [lbs]<br>Net<br>664kg [lbs]<br>Gross | 50 L |

| Base Rental Power + options suivantes = Full Rental Power | |
|---|---|
| Double wall and great autonomy tank | Water separator pre-filter |
| Voltage trimmer | Fixed earth leakage protection with spike |
| Battery cut-out | Lub oil drain pump |

## ENGINE SPECIFICATIONS

| | | |
|---|---|---|
| STANDARD FEATURES | Manufacturer / Model | MITSUBISHI S4L2-SD , 4-strokes, Athmo , 4 X |
| | Cylinder Arrangement | L |
| | Displacement | 1.75L [106.8C.I.] |
| | Bore and Stroke | 92mm [3.6in.] X 78mm [3.1in.] |
| | 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] |
| | Max. fuel pump 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 | Heat rejection to exhaust | 14kW [796Btu/mn] |
| | Radiated heat to ambiant | 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 [1.295gal] |
| | Max water temperature | 111°C [232°F] |
| | Outlet water temperature | 93°C [199°F] |
| | Fan power | 0.5 kW |
| | Fan air flow w/o restriction | 0.8m3/s [1695cfm] |
| | Available restriction on air flow | 10mm CE [0.4in. WG] |
| | Type of coolant | Gencool |
| | Thermostat | 82-95 °C |
| GAS SYSTEM | HC | N/A |
| | CO | N/A |
| | Nox | N/A |
| | PM | N/A |

## ALTERNATOR SPECIFICATIONS

| | | |
|---|---|---|
| GENERAL DATAS | Manufacturer / Type | LEROY SOMER LSA422S4 |
| | 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 | R438 |
| | Sustained short circuit current | 1.4 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) | skva |
| OTHER DATAS | Continuous nominal rating @ 40°C | 17.5 kVA |
| | Standby rating @ 27°C | 21 kVA |
| | Efficiencies @ 4/4 load | 87.6 % |
| | Air flow | 0.15m3/s [317.83cfm] |
| | Short circuit ratio;50 (Kcc) | 0.76 |
| | Direct axis synchro reactance unsaturated (Xd) | 160 % |
| | Quadra axis synchro reactance unsaturated (Xq) | 80 % |
| | Open circuit time constant;50 (T'do) | 410 ms |
| | Direct axis transient reactance saturated (X'd) | 10.1 % |
| | Short circuit transient time constant (T'd) | 30 ms |
| | Direct axis subtransient reactance saturated (X''d) | 5 % |
| | Subtransient time constant (T''d) | 3 ms |
| | Quadra axis subtransient reactance saturated (X''q) | 7.1 % |
| | Zero sequence reactance unsaturated (Xo) | 0.8 % |
| | Negative sequence reactance saturated (X2) | 6 % |
| | Armature time constant (Ta) | 4 ms |
| | No load excitation current (io) | 0.6 A |
| | Full load excitation current (ic) | ic |
| | Full load excitation voltage (uc) | 36 V |
| | Recovery time (Delta U = 20% transitoire) | 500 ms |
| | Motor start (Delta = 20% perm. Or 50% trans.) | 51 kVA |
| | Transient dip (4/4 charge) – PF : 1.8 AR | 13.6 % |
| | No load losses | 0.59kW [0.59Kw] |
| | Heat rejection | 2 kW |

## 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