

# R350C2

Engine VOLVO , TAD941GE Stage 2  
Alternator LEROY SOMER , LSA462VL12

## STANDARD FEATURES

- Analog engine
- Connection terminal block "rental type"
- Four-pole breaker
- 2 point lifting ring with integrated ladder
- Rental specific soundproofed canopy
- Diesel low level
- AREP Leroy-Somer Alternator
- Easy radiator access
- Rain cap



| Voltage | Power ESP<br>kWe/kVA | Power PRP<br>kWe/kVA | Standby Amps |
|---------|----------------------|----------------------|--------------|
| 400/230 | 280 / 350            | 252 / 315            | 476          |



### 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, 1000 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   |
|---|----------|----------|---|---|--------|
|  M228-DW | 77.2     | 67       | Long: 4527mm [178in]<br>Wide: 1410mm [56in]<br>Height: 2780mm [109in] | 4520kg [9965lbs]<br>Net<br>5888kg [12981lbs]<br>Gross | 1368 L |
|  M228    | 77.2     | 67       | Long: 4475mm [176in]<br>Wide: 1410mm [56in]<br>Height: 2690mm [106in] | 3830kg [8444lbs]<br>Net<br>4300kg [9480lbs]<br>Gross  | 470 L  |

### Base Rental Power + options suivantes = Full Rental Power

|   |                               |
|---|-------------------------------|
| Double wall and great autonomy tank       | Air inlet manifold preheating |
| Water separator pre-filter                | Voltage trimmer               |
| Fixed earth leakage protection with spike | Battery cut-out               |



## ENGINE SPECIFICATIONS

#

|                      |                                    |   |
|----------------------|------------------------------------|---|
| STANDARD<br>FEATURES | Manufacturer / Model               | VOLVO TAD941GE , 4-strokes, Turbo ,<br>Air/Air DC 6 X |
|                      | Cylinder Arrangement               | L   |
|                      | Displacement                       | 9.36L [571.2C.I.]                                     |
|                      | Bore and Stroke                    | 138mm [5.4in.] X 120mm [4.7in.]                       |
|                      | Compression ratio                  | 17.4 : 1  |
|                      | Rated RPM                          | 1500 Rpm  |
|                      | Piston Speed                       | 6.9m/s [22.6ft./s]                                    |
|                      | Max. stand by Power at rated RPM   | 320kW [429BHP]  |
|                      | Frequency regulation, steady state | +/- 0.5%  |
|                      | BMEP                               | 26bar [377psi]  |
| Governor : type      | ELEC                               |   |
| EXHAUST<br>SYSTEM    | Exhaust gas flow                   | 775L/s [1642cfm]                                      |
|                      | Exhaust temperature                | 519°C [966°F]   |
|                      | Max back pressure                  | 1000mm CE [39in. WG]                                  |
| FUEL SYSTEM          | 110% (Stand By power )             | 75.9L/h [20.1gal/hr]                                  |
|                      | 100% (of the Prime Power)          | 68.1L/h [18.0gal/hr]                                  |
|                      | 75% (of the Prime Power)           | 50.6L/h [13.4gal/hr]                                  |
|                      | 50% (of the Prime Power)           | 35.1L/h [9.3gal/hr]                                   |
|                      | Max. fuel pump flow                | 108L/h [28.5gal/hr]                                   |
| OIL SYSTEM           | Total oil capacity w/filters       | 33L [8.7gal]  |
|                      | Oil Pressure low idle              | 0.7bar [10.1psi]                                      |
|                      | Oil Pressure rated RPM             | 6bar [86.9psi]  |
|                      | Oil consumption 100% load          | 0.06L/h [0.0159gal/hr]                                |
|                      | Oil capacity carter                | 28L [7.4gal]  |
| THERMAL<br>BALANCE   | Heat rejection to exhaust          | 224kW [12737Btu/mn]                                   |
|                      | Radiated heat to ambient           | 9kW [512Btu/mn]                                       |
|                      | Heat rejection to coolant          | 129kW [7335Btu/mn]                                    |
| AIR INTAKE           | Max. intake restriction            | 500mm CE [20in. WG]                                   |
|                      | Engine air flow                    | 295L/s [625cfm]                                       |
| COOLANT<br>SYSTEM    | Radiator & engine capacity         | 41L [10.832gal]                                       |
|                      | Max water temperature              | 103°C [217°F]   |
|                      | Outlet water temperature           | 93°C [199°F]  |
|                      | Fan power                          | 15 kW   |
|                      | Fan air flow w/o restriction       | 5.9m <sup>3</sup> /s [12503cfm]                       |
|                      | Available restriction on air flow  | 20mm CE [0.8in. WG]                                   |
|                      | Type of coolant                    | Glycol-Ethylene                                       |
| Thermostat           | 82-92 °C                           |   |
| GAS SYSTEM           | HC                                 | 30 mg/Nm <sup>3</sup>                                 |
|                      | CO                                 | 340 mg/Nm <sup>3</sup>                                |
|                      | Nox                                | 2200 mg/Nm <sup>3</sup>                               |
|                      | PM                                 | 30 mg/Nm <sup>3</sup>                                 |



## ALTERNATOR SPECIFICATIONS

|   |   |                                    |
|---|---|------------------------------------|
| GENERAL<br><br>DATAS                                  | Manufacturer / Type                                 | LEROY SOMER LSA462VL12             |
|   | Number of phase                                     | 3                                  |
|   | Power factor (Cos Phi)                              | 0.8                                |
|   | Altitude  | < 1000 m                           |
|   | Overspeed   | 2250 rpm                           |
|   | Pole : number                                       | 4                                  |
|   | Exciter type  | SHUNT                              |
|   | Insulation : class, temperature rise                | H / H                              |
|   | Voltage regulator                                   | R230                               |
|   | Sustained short circuit current                     | 3.5 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) | skva  |                                    |
| OTHER<br><br>DATAS                                    | Continuous nominal rating @ 40°C                    | 300 kVA                            |
|   | Standby rating @ 27°C                               | 341 kVA                            |
|   | Efficiencies @ 4/4 load                             | 93.7 %                             |
|   | Air flow  | 0.43m <sup>3</sup> /s [911.11 cfm] |
|   | Short circuit ratio;50 (Kcc)                        | 0.5                                |
|   | Direct axis synchro reactance unsaturated (Xd)      | 273 %                              |
|   | Quadra axis synchro reactance unsaturated (Xq)      | 164 %                              |
|   | Open circuit time constant;50 (T'do)                | 2260 ms                            |
|   | Direct axis transient reactance saturated (X'd)     | 12.1 %                             |
|   | Short circuit transient time constant (T'd)         | 105 ms                             |
|   | Direct axis subtransient reactance saturated (X''d) | 7.3 %                              |
|   | Subtransient time constant (T''d)                   | 10 ms                              |
|   | Quadra axis subtransient reactance saturated (X''q) | 9 %                                |
|   | Zero sequence reactance unsaturated (Xo)            | 0.5 %                              |
|   | Negative sequence reactance saturated (X2)          | 8.1 %                              |
|   | Armature time constant (Ta)                         | 16 ms                              |
|   | No load excitation current (io)                     | 1.1 A                              |
|   | Full load excitation current (ic)                   | ic                                 |
|   | Full load excitation voltage (uc)                   | 35 V                               |
|   | Recovery time (Delta U = 20% transitoire)           | 500 ms                             |
|   | Motor start (Delta = 20% perm. Or 50% trans.)       | 850 kVA                            |
|   | Transient dip (4/4 charge) – PF : 1.8 AR            | 13 %                               |
| No load losses  | 4.9kW [4.90Kw]                                      |                                    |
| Heat rejection  | 16.7 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...