



## R550C3

|                   |           |
|-------------------|-----------|
| Engine ref.       | TAD1651GE |
| Alternator ref.   | AT02450T  |
| Canopy            | M3228     |
| Performance class | G3        |

### GENERAL CHARACTERISTICS

|                        |         |
|------------------------|---------|
| Frequency (Hz)         | 50      |
| Voltage (V)            | 400/230 |
| Max power ESP (kVA)    | 550     |
| Max power ESP (kWe)    | 440     |
| Max power PRP (kVA)    | 500     |
| Max power PRP (kWe)    | 400     |
| Intensity (A)          | 794     |
| Standard Control Panel | TELYS   |

### DESCRIPTIVE

- Stage 3a engine
- Four-pole circuit breaker
- Connection terminal box rental type
- Containment fuel tank and large autonomy
- Forks and frame protection pads
- Adjustable earth fault protection and earthing rod
- Inlet air preheating
- Battery isolating switch
- Oil drainage pump
- Heavy duty air filter with interchangeable cartridge
- Primary filter
- Heat hand protections (EC standards)
- Sockets pack : 1x32A 400V - 1x16A MONO indus - 1xMONO SCHUCCO
- Electronic governor with speed adjustment

### SMALL AUTONOMY DIMENSIONS

|                            |      |
|----------------------------|------|
| Length (mm)                | 5000 |
| Width (mm)                 | 1611 |
| Height (mm)                | 2600 |
| Dry weight (kg)            | 6082 |
| Tank capacity (L)          | 1481 |
| Autonomy @ 75% of load (h) | 0    |
| Autonomy @ 50% of load (h) | 0    |

### SOUND LEVELS

|  |           |
|--|-----------|
| Acoustic pressure level @1m in dB(A)<br>(Associated uncertainty) | 76 (0,70) |
| Acoustic pressure level @7m in dB(A)<br>(Associated uncertainty) | 66        |
| Sound power level guaranteed (Lwa)                               | 96        |

### 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. 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

According to the standard, the nominal power assigned by the genset is given for 25°C Air Inlet Temperature, of a barometric pressure of 100 kPa (100 m A.S.L), and 30 % relative humidity. For particular conditions in your installation, refer to the derating table.

### ASSOCIATED UNCERTAINTY

For the generating sets used indoor, where the acoustic pressure levels depends on the installation conditions, it is not possible to specify the ambient noise level in the exploitation and maintenance instructions . You will also find in our exploitation and maintenance instructions a warning concerning the air noise dangers and the need to implement appropriated preventive measures.



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### ENGINE CHARACTERISTICS

#### GENERAL ENGINE DATAS

|  |            |
|--|------------|
| Engine brand                               | VOLVO      |
| Engine ref.                                | TAD1651GE  |
| Air inlet system                           | Turbo      |
| Cylinders configuration                    | L          |
| Number of cylinders                        | 6          |
| Displacement (L)                           | 16,12      |
| Charge Air coolant                         | Air/Air DC |
| Bore (mm) x Stroke (mm)                    | 144 x 165  |
| Compression ratio                          | 16.5 : 1   |
| Speed (RPM)                                | 1500       |
| Pistons speed (m/s)                        | 8,25       |
| Maximum stand-by power at rated RPM (kW)   | 484        |
| Frequency regulation, steady state (%) +/- | 0.5%       |
| BMEP (bar)                                 | 21,88      |
| Governor type                              | Electronic |

#### COOLING SYSTEM

|   |                 |
|---|-----------------|
| Radiator & Engine capacity (L)                          | 60              |
| Max water temperature (°C)                              | 107             |
| Outlet water temperature (°C)                           | 93              |
| Fan power (kW)  | 11              |
| Fan air flow w/o restriction (m <sup>3</sup> /s)        |                 |
| Available restriction on air flow (mm H <sub>2</sub> O) |                 |
| Type of coolant   | Glycol-Ethylene |
| Thermostat modulating range HT (°C)                     | 82-92           |

#### EMISSIONS

|                                     |      |
|-------------------------------------|------|
| Emission PM (g/kW.h)                | 0,14 |
| Emission CO (g/kW.h)                | 0,77 |
| Emission HC+NO <sub>x</sub> (g/kWh) |      |
| Emission HC (g/kW.h)                | 0,14 |

#### EXHAUST

|  |      |
|--|------|
| Exhaust gas temperature @ ESP 50Hz (°C)          | 492  |
| Exhaust gas flow @ ESP 50 Hz (L/s)               | 1267 |
| Max. exhaust back pressure (mm H <sub>2</sub> O) | 1000 |

#### FUEL

|                               |        |
|-------------------------------|--------|
| Consumption @ 110% load (L/h) | 113,90 |
| Consumption @ 100% load (L/h) | 102,70 |
| Consumption @ 75% load (L/h)  | 79,80  |
| Consumption @ 50% load (L/h)  | 55     |
| Maximum fuel pump flow (L/h)  | 141    |

#### OIL

|                                 |      |
|---------------------------------|------|
| Oil capacity (L)                | 48   |
| Min. oil pressure (bar)         | 0,70 |
| Max. oil pressure (bar)         | 6,50 |
| Oil consumption 100% load (L/h) | 0,10 |
| Oil sump capacity (L)           | 42   |

#### HEAT BALANCE

|                                |     |
|--------------------------------|-----|
| Heat rejection to exhaust (kW) | 317 |
| Radiated heat to ambient (kW)  | 19  |
| Heat rejection to coolant (kW) | 193 |

#### AIR INTAKE

|   |     |
|---|-----|
| Max. intake restriction (mm H <sub>2</sub> O) | 500 |
| Intake air flow (L/s)                         | 500 |



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### ALTERNATOR CHARACTERISTICS

|   |                         |
|---|-------------------------|
| Alternator ref.   | AT02450T                |
| Number of Phase   | Three phase             |
| Power factor (Cos Phi)                                  | 0,80                    |
| Altitude (m)  | 0 to 1000               |
| Overspeed (rpm)   | 2250                    |
| Number of pole  | 4                       |
| Capacity for maintaining short circuit at 3 In for 10 s | Yes                     |
| Insulation class  | H                       |
| T° class (H/125°), continuous 40°C                      | H / 125°K               |
| T° class, standby 27°C                                  | H / 163°K               |
| AVR Regulation  | Yes                     |
| Total Harmonic Distortion in no-load DHT (%)            | <1.5                    |
| Total Harmonic Distortion, on load DHT (%)              | <2                      |
| Wave form : NEMA=TIF                                    | <50                     |
| Wave form : CEI=FHT                                     | <2                      |
| Number of bearing                                       | 1                       |
| Coupling  | Direct                  |
| Voltage regulation at established rating (+/- %)        | 0,50                    |
| Recovery time (Delta U = 20% transient) (ms)            | 500                     |
| Indication of protection                                | IP 23                   |
| Technology  | Without collar or brush |

|   |         |
|---|---------|
| Continuous Nominal Rating 40°C (kVA)                    | 500     |
| Standby Rating 27°C (kVA)                               | 570     |
| Efficiencies 100% of load (%)                           | 94,50   |
| Air flow (m3/s)   | 0,90    |
| Short circuit ratio (Kcc)                               | 0,4110  |
| Direct axis synchro reactance unsaturated (Xd) (%)      | 307     |
| Quadra axis synchro reactance unsaturated (Xq) (%)      | 184     |
| Open circuit time constant (T'do) (ms)                  | 1930    |
| Direct axis transient reactance saturated (X'd) (%)     | 15,90   |
| Short circuit transient time constant (T'd) (ms)        | 100     |
| Direct axis subtransient reactance saturated (X''d) (%) | 11,10   |
| Subtransient time constant (T''d) (ms)                  | 10      |
| Quadra axis subtransient reactance saturated (X''q) (%) | 14,70   |
| Subtransient time constant (T''q) (ms)                  | 10      |
| Zero sequence reactance unsaturated (Xo) (%)            | 0,70    |
| Negative sequence reactance saturated (X2) (%)          | 12,95   |
| Armature time constant (Ta) (ms)                        | 15      |
| No load excitation current (io) (A)                     | 0,99    |
| Full load excitation current (ic) (A)                   | 3,59    |
| Full load excitation voltage (uc) (V)                   | 36      |
| Engine start (Delta U = 20% perm. or 50% trans.) (kVA)  | 1195    |
| Transient dip (4/4 load) - PF : 0,8 AR (%)              | 13      |
| No load losses (W)                                      | 6551,63 |
| Heat rejection (W)                                      | 23152,8 |
|   | 5       |
| Unbalanced load acceptance ratio (%)                    | 70      |

TELYS, ergonomic and user-friendly



The highly versatile TELYS control unit is complex yet accessible, thanks to the particular attention paid to optimising its ergonomics and ease of use. With its large display screen, buttons and scroll wheel, it places the accent on simplicity and communication.

The TELYS offers the following functions:

Electrical measurements: voltmeter, frequency meter, ammeter.

Engine parameters: working hours counter, oil pressure, coolant temperature, fuel level, engine speed, battery voltage.

Alarms and faults: oil pressure, coolant temperature, failure to start, overspeed, alternator min./max., battery voltage min./max., emergency stop, fuel level.

Ergonomics: wheel for navigating around the various menus.

Communication: remote control and operation software, USB connections, PC connection.

Automatic control: automatic start.

For more information on the product and its options, please refer to the sales documentation.