



#### DESCRIPTIVE

- Connection terminal box rental type
- Containment fuel tank and large autonomy
- Forks and frame protection pads
- Battery isolating switch
- Heavy duty air filter with interchangeable cartridge
- Access door to the radiator

#### 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.

## R500URC

Engine ref.	TAD1641GE
Kohler Alternator description	KH02450T
Canopy	M3228
Performance class	G3

#### GENERAL CHARACTERISTICS

Frequency (Hz)	60 Hz
Voltage (V)	480/277
Standard Control Panel	TELYS

Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
480/277	504	630	458	573	758
220/127	503	629	458	572	1651
208/120	484	605	440	550	1679
380/220	496	620	451	564	942

#### SMALL AUTONOMY DIMENSIONS

Length (mm)	5000
Width (mm)	1611
Height (mm)	2600
Dry weight (kg)	5990,00
Tank capacity (L)	1481,00

#### SOUND LEVELS

Acoustic pressure level @1m in dB(A) 60Hz (100% PRP) (Associated uncertainty)	83 (0,70)
Acoustic pressure level @7m in dB(A) 60Hz (100% PRP) (Associated uncertainty)	73

## R500URC

### ENGINE CHARACTERISTICS

#### GENERAL ENGINE DATAS

Engine brand	VOLVO
Engine ref.	TAD1641GE
Air inlet system	Turbo
Cylinder configuration	L
Number of cylinders	6
Displacement (l)	16,12
Charge Air coolant	Air/Air
Bore (mm) x Stroke (mm)	144,00 x 165,0
Compression ratio	16.5 : 1
Speed (RPM)	1800
Pistons speed 60Hz (m/s)	9,90
Maximum stand-by power at rated RPM 60Hz (kW)	565,0
Frequency regulation, steady state (%) +/-	0.25%
BMEP @ PRP 60Hz (bar)	21,2
Governor type	Electronic

#### COOLING SYSTEM

Radiator & Engine capacity (l)	60,00
Fan power 60Hz (kW)	19,00
Fan air flow w/o restriction (m3/s)	9,80
Available restriction on air flow (mm H2O)	25,00
Type of coolant	Glycol-Ethylene

#### EMISSIONS

Emission PM 60Hz (g/kWh)	0,110
Emission CO 60HZ (g/kW.h)	0,690
Emission HC+NOx (g/kWh)	5,350
Emission HC 60Hz (g/kW.h)	0,160

#### EXHAUST

Exhaust gas temperature @ ESP 60Hz (°C)	479
Exhaust gas flow @ ESP 60Hz (l/s)	1840,00
Max. exhaust back pressure (mm H2O)	1000

#### FUEL

Fuel consumption @ ESP Max Power 60Hz (l/h)	138,0
Fuel consumption @ PRP Max Power 60Hz (l/h)	120,7
Fuel consumption @ 75% of PRP Power 60Hz (l/h)	88,8
Fuel consumption @ 50% of PRP Power 60Hz (l/h)	59,8
Maximum fuel pump flow 60Hz (l/h)	190,0

#### OIL

Oil system capacity including filters (l)	48,00
Min. oil pressure (bar)	0,7
Max. oil pressure (bar)	6,5
Oil consumption 100% ESP 60Hz (l/h)	0,110
Oil sump capacity (l)	42,00

#### HEAT BALANCE

Heat rejection to exhaust (kW)	442
Radiated heat to ambient (kW)	24,0
Heat rejection to coolant HT (kW)	231

#### AIR INTAKE

Max. intake restriction (mm H2O)	500
Combustion air flow (l/s)	763,00

Kohler Alternator description	KH02450T	Continuous Nominal Rating 40°C (kVA)	625,0
Number of Phase	Three phase	Standby Rating 27°C (kVA)	700,0
Power factor (Cos Phi)	0,8	Efficiencies 100% of load (%)	94,5
Altitude (m)	0 à 1000	Air flow (m3/s)	1,100
Overspeed (rpm)	2250	Short circuit ratio (Kcc)	0,395
Number of pole	4	Direct axis synchro reactance unsaturated (Xd) (%)	319,0
Capacity for maintaining short circuit at 300% of rated current for 10 s	Yes	Quadra axis synchro reactance unsaturated (Xq) (%)	163,0
Insulation class	H	Open circuit time constant (T'do) (ms)	1930,00
T° class (H/125K), continuous 40°C	H / 125°K	Direct axis transient reactance saturated (X'd) (%)	16,5
T° class (H/163K), standby 27°C	H / 163°K	Short circuit transient time constant (T'd) (ms)	100,000
AVR Regulation	Yes	Direct axis subtranscient reactance saturated (X''d) (%)	11,5
Total Harmonic Distortion in no-load DHT (%)	<2	Subtranscient time constant (T''d) (ms)	10,000
Total Harmonic Distortion, on linear load DHT (%)	<2	Quadra axis subtranscient reactance saturated (X''q) (%)	15,30
Wave form : NEMA=TIF	<50	Subtranscient time constant (T''q) (ms)	10,0
Wave form : CEI=FHT	<2	Zero sequence reactance unsaturated (Xo) (%)	0,60
Number of bearing	Single Bearing	Negative sequence reactance saturated (X2) (%)	13,49
Coupling	Direct	Armature time constant (Ta) (ms)	15,000
Voltage regulation at established rating (+/- %)	0,50	No load excitation current (io) (A)	0,99
Recovery time (Delta U = 20% transient) (ms)	500	Full load excitation current (ic) (A)	3,66
Indication of protection	IP 23	Full load excitation voltage (uc) (V)	62,7
Technology	Brushless	Engine start (Delta U = 20% perm. or 30% trans.) (kVA)	1192,59
		Transient dip (4/4 load) - PF : 0,8 AR (%)	13,00
		No load losses (W)	10094,5
		Heat rejected to ambient air (kW)	5
		Unbalanced load acceptance ratio (%)	28,75
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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.