V550C2

Motor type	TAD1641GE
Alternator type	LSA472M7

GENERAL CHARACTERISTICS

Frequency (Hz)	50
Reference voltage (V)	T51A2
Max power (kVA)	550
Max power ESP (kWe)	440
Max power ESP (kVA)	500
Max power PRP (kWe)	400
Intensity (A)	794
Standard Control Panel	TELYS
Optional control panel	KERYS

DIMENSIONS AND NOISE LEVELS

DIMENSIONS COMPACT VERSION

Length (mm)	3470
Width (mm)	1500
Height (mm)	2043
Dry weight (kg)	3620
Tank capacity (L)	500

DIMENSIONS SOUNDPROOFED VERSION

Canopy	M229
Length (mm).	5031
Width (mm).	1560
Height (mm).	2435
Dry weight (kg).	4870
Tank capacity (L).	500
dB(A)@1m (50Hz)	78.1
LWa (50Hz)	97

DESCRIPTIVE

- Electronic governor
- Mechanically welded chassis with antivibration suspension
- Main line circuit breaker
- Radiator for wiring temperature of 48/50℃ max wit h mechanical fan
- Protective grille for fan and rotating parts
- 9 dB(A) silencer supplied separately
- Charger DC starting battery with electrolyte
- 24 V charge alternator and starter
- Delivered with oil and coolant -30℃
- Manual for use and installation

POWERS

Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
415/240	440	550	400	500	765
400/230	440	550	400	500	794
380/220	440	550	400	500	836
240 TRI	440	550	400	500	1323
230 TRI	440	550	400	500	1381
220 TRI	440	550	400	500	1443
200/115	440	550	400	500	1588

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

Standard reference conditions 25℃ Air Intlet Temp. 1 000 m A.S.L. 60% relative humidity.

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TECHNICAL DESCRIPTION

GENERAL ENGINE DATAS

Motor model	VOLVO TAD1641GE , 4-temps, TURBO , AIR/AIR 6 X
Cylinder arrangement	L
Displacement (C.I.)	16.12
Bore (mm) x Stroke (mm)	144 x 165
Compression ratio	16.5
Speed (RPM)	1500
Pistons speed (m/s)	8.25
Maximum stand-by power at rated RPM (kW)	473
Frequency regulation (%)	0.5
BMEP (bar)	21.34
Governor type	ELEC

COOLING SYSTEM

Radiator & Engine capacity (L)	60
Max water temperature (°C)	103
Outlet water temperature (°C)	93
Fan power (kW)	11
Fan air flow w/o restriction (m3/s)	10.9
Available restriction on air flow (mm CE)	30
Type of coolant	GLYCOL
Thermostat (°C)	86-96

EMISSIONS

Emissions PM (g/kW.h)	0.09
Emission CO (g/kW.h)	1.15
Emissions HCNOx (g/kWh)	N/A
Emission HC (g/kW.h)	0.12

EXHAUST

Exhaust gas temperature (°C)	455
Exhaust gas flow (L/s)	1533
Max. exhaust back pressure (mm CE)	1000

FUEL

Consumption @ 110% load (L/h)	112.56
Consumption @ 100% load (L/h)	102.05
Consumption @ 75% load (L/h)	75.38
Consumption @ 50% load (L/h)	51.02
Maximum fuel pump flow (L/hr)	170

OIL

Oil capacity (L)	48
Min. oil pressure (bar)	0.7
Max. oil pressure (bar)	6.5
Oil consumption 100% load (L/h)	0.1
Carter oil capacity (L)	42

HEAT BALANCE

Heat rejection to exhaust (kW)	326
Radiated heat to ambiant (kW)	20
Haet rejection to coolant (kW)	184

AIR INTAKE

Max. intake restriction (mm CE)	500
Intake air flow (L/s)	633

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ALTERNATOR SPECIFICATIONS

GENERAL DATAS

Alternator brand	LEROY SOMER
Alternator type	LSA472M7
Number of phase	3
Power factor (Cos Phi)	0.8
Altitude (m)	0-1000
Overspeed (rpm)	2250
Number of pole	4
Excitation system	SHUNT
Insulation class / T°class, continuous 40℃	H / H-125
Regulation	R230
Harmonic factor, no load TGH/THC	<1.5
Wave form : NEMA=TIF-(TGH/THC)	<50
Wave form : CEI=FHT-(TGH/THC)	<2
Number of bearing	1
Coupling	DIRECT
Voltage regulation at established rating (%)	0.5
Recovery time (Delta U = 20% transitoire) (ms)	500

OTHER DATAS

Continuous Nominal Rating 40℃ (kVA)	500
Standby Rating 27℃ (kVA)	570
Efficiencies 4/4 load (%)	94.5
Air flow (m3/s)	0.9
Short circuit ratio (Kcc)	0.41
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) (%)	15.9
Short circuit transient time constant (T'd) (ms)	100
Direct axis subtransient reactance saturated (X''d) (%)	11.1
Subtransient time constant (T''d) (ms)	10
Quadra axis subtransient reactance saturated (X''q) (%)	14.7
Zero sequence reactance unsaturated (Xo) (%)	0.7
Negative sequence reactance saturated (X2) (%)	13
Armature time constant (Ta) (ms)	15
No load excitation current (io) (A)	1
Full load excitation current (ic) (A)	3.6
Full load excitation voltage (uc) (V)	36
Recovery time (Delta U = 20% transitoire) (ms)	500
Motor start (Delta U = 20% perm. or 50% trans.) (kVA)	1073
Transient dip (4/4 charge) - PF : 0,8 AR (%)	14.6
No load losses (W)	6540
Heat rejection (W)	23040

DIMENSIONS AND NOISE LEVELS

CONTAINMENT

Canopy	M229 DW
Length (mm).	5083
Width (mm).	1560
Height (mm).	2700
Dry weight (kg).	5590
Tank capacity (L).	1770
dB(A)@1m (50Hz)	78.1
LWa (50Hz)	97

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CONTROL PANEL

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.

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

KERYS, coupling and adaptability

The KERYS control unit has been designed to fulfil the specific requirements of professionals in terms of operating and monitoring generating sets. It therefore offers a wide range of functions.
This control unit is fitted as standard to all generating sets designed to be used for coupling and is offered as an option across the rest of our range.
The KERYS can be built into the central console, fitted directly on the generating set, or in a separate cabinet, to fulfil all the requirements for low and high output power plants.

>The KERYS 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.

Additional functions: coupling, website, diagnostic aid, assistance and maintenance, graphs and archiving, load impact management, 8 available installation configurations, certification in line with international standards.

For more information, please refer to the sales documentation.
Additional specifications :Website, Troubleshooting, Assistance and Maintenance, Plotting and logging, Load impact, 8 configurations available, Compliance with international standards...