



DESCRIPTIVE

- Electronic governor
- Mechanically welded chassis with antivibration suspension
- Main line circuit breaker
- Radiator for wiring temperature of 48/50°C max with 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°C
- Manual for use and installation



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.

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Engine type	TWD1643GE
Alternator type	LSA 49.1 S4

GENERAL CHARACTERISTICS

Frequency (Hz)	50
Reference voltage (V)	400/230
Max power ESP (kVA)	700
Max power ESP (kWe)	560
Max power PRP (kVA)	650
Max power PRP (kWe)	520
Intensity (A)	1010
Standard Control Panel	TELYS
Optional control panel	KERYS

DIMENSIONS AND NOISE LEVELS

DIMENSIONS COMPACT VERSION

Length (mm)	3470
Width (mm)	1630
Height (mm)	2080
Dry weight (kg)	3890
Tank capacity (L)	610

DIMENSIONS SOUNDPROOFED VERSION

Canopy	M230
Length (mm).	5031
Width (mm).	1690
Height (mm).	2662
Dry weight (kg).	5410
Tank capacity (L).	610
Acoustic pressure level @1m in dB(A)	85.2
Sound power level guaranteed (Lwa)	105

POWERS

Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
415/240	560	700	509	636	974
400/230	560	700	509	636	1010
380/220	553	691	503	628	1050
240 TRI	558	697	507	634	1677
230 TRI	535	669	487	608	1679
220 TRI	511	639	465	581	1677



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TECHNICAL SPECIFICATIONS

GENERAL ENGINE DATAS

Engine model	VOLVO TWD1643GE , 4- temps, TURBO , AIR/WATER 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)	596
Frequency regulation (%)	0.5
BMEP (bar)	26.6
Governor type	ELEC

COOLING SYSTEM

Radiator & Engine capacity (L)	95
Max water temperature (°C)	103
Outlet water temperature (°C)	93
Fan power (kW)	17
Fan air flow w/o restriction (m3/s)	10
Available restriction on air flow (mm EC)	30
Type of coolant	GLYCOL
Thermostat (°C)	86-96

EMISSIONS

Emission PM (g/kW.h)	0.08
Emission CO (g/kW.h)	0.69
Emission HCNOx (g/kWh)	N/A
Emission HC (g/kW.h)	0.08

EXHAUST

Exhaust gas temperature (°C)	450
Exhaust gas flow (L/s)	1693
Max. exhaust back pressure (mm EC)	1000

FUEL

Consumption @ 110% load (L/h)	142.6
Consumption @ 100% load (L/h)	128
Consumption @ 75% load (L/h)	94.5
Consumption @ 50% load (L/h)	63
Maximum fuel pump flow (L/h)	190

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)	463
Radiated heat to ambient (kW)	20
Haet rejection to coolant (kW)	218

AIR INTAKE

Max. intake restriction (mm EC)	150
Intake air flow (L/s)	727



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ALTERNATOR SPECIFICATIONS

GENERAL DATAS

Alternator brand	LERROY SOMER
Alternator type	LSA 49.1 S4
Number of phase	3
Power factor (Cos Phi)	0.8
Altitude (m)	0-1000
Overspeed (rpm)	2250
Number of pole	4
Excitation system	AREP
Insulation class / T° class, continuous 40°C	H / H-125
Regulation	R450
Harmonic factor, no load TGH/THC	<4
Wave form : NEMA=TIF-(TGH/THC)	INF50
Wave form : CEI=FHT-(TGH/THC)	INF2
Number of bearing	1
Coupling	DIRECT
Voltage regulation at established rating (%)	0.5
Recovery time (Delta U = 20% transient) (ms)	500

OTHER DATAS

Continuous Nominal Rating 40°C (kVA)	660
Standby Rating 27°C (kVA)	725
Efficiencies 4/4 load (%)	93.9
Air flow (m3/s)	1
Short circuit ratio (Kcc)	0.38
Direct axis synchro reactance unsaturated (Xd) (%)	343
Quadra axis synchro reactance unsaturated (Xq) (%)	205
Open circuit time constant (T'do) (ms)	1958
Direct axis transient reactance saturated (X'd) (%)	17.5
Short circuit transient time constant (T'd) (ms)	100
Direct axis subtransient reactance saturated (X''d) (%)	14
Subtransient time constant (T''d) (ms)	10
Quadra axis subtransient reactance saturated (X''q) (%)	16.3
Zero sequence reactance unsaturated (Xo) (%)	0.9
Negative sequence reactance saturated (X2) (%)	15.2
Armature time constant (Ta) (ms)	15
No load excitation current (io) (A)	0.9
Full load excitation current (ic) (A)	3.6
Full load excitation voltage (uc) (V)	43
Recovery time (Delta U = 20% transient) (ms)	500
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	1578
Transient dip (4/4 load) - PF : 0,8 AR (%)	13.3
No load losses (W)	8110
Heat rejection (W)	33710

CONTAINMENT

Canopy	M230 DW
Length (mm).	5083
Width (mm).	1690
Height (mm).	2922
Dry weight (kg).	6140
Tank capacity (L).	1950
Acoustic pressure level @1m in dB(A)	85.2
Sound power level guaranteed (Lwa)	105

DIMENSIONS AND NOISE LEVELS

TELYS, ergonomic and user-friendly

KERYS, coupling and adaptability



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.

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...