



R700C2

Engine VOLVO , TWD1643GE Stage 2
 Alternator LEROY SOMER , LSA491S4

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 kWe/kVA	Power PRP kWe/kVA	Standby Amps
415/240	560 / 700	509 / 636	974



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
 M230-DW	85.2	75.2	Long: 5083mm [200in] Wide: 1690mm [67in] Height: 2955mm [116in]	6140kg [lbs] Net 7980kg [lbs] Gross	1950 L
 M230	85.2	75.2	Long: 5031mm [198in] Wide: 1690mm [67in] Height: 2922mm [115in]	5410kg [lbs] Net 6090kg [lbs] Gross	610 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 FEATURES	Manufacturer / Model	VOLVO TWD1643GE , 4-strokes, Turbo , Air/Water SC 6 X
	Cylinder Arrangement	L
	Displacement	16.12L [983.7C.I.]
	Bore and Stroke	165mm [6.5in.] X 144mm [5.7in.]
	Compression ratio	16.5 : 1
	Rated RPM	1500 Rpm
	Piston Speed	8.25m/s [27.1ft./s]
	Max. stand by Power at rated RPM	596kW [799BHP]
	Frequency regulation, steady state	+/- 0.5%
	BMEP	27.4bar [397psi]
Governor : type	ELEC	
EXHAUST SYSTEM	Exhaust gas flow	1693L/s [3588cfm]
	Exhaust temperature	450°C [842°F]
	Max back pressure	1000mm CE [39in. WG]
FUEL SYSTEM	110% (Stand By power)	142.6L/h [37.7gal/hr]
	100% (of the Prime Power)	128L/h [33.8gal/hr]
	75% (of the Prime Power)	94.5L/h [25.0gal/hr]
	50% (of the Prime Power)	63L/h [16.6gal/hr]
	Max. fuel pump flow	190L/h [50.2gal/hr]
OIL SYSTEM	Total oil capacity w/filters	48L [12.7gal]
	Oil Pressure low idle	0.7bar [10.1psi]
	Oil Pressure rated RPM	6.5bar [94.2psi]
	Oil consumption 100% load	0.1L/h [0.0gal/hr]
	Oil capacity carter	42L [11.1gal]
THERMAL BALANCE	Heat rejection to exhaust	463kW [26326Btu/mn]
	Radiated heat to ambient	20kW [1137Btu/mn]
	Heat rejection to coolant	218kW [12395Btu/mn]
AIR INTAKE	Max. intake restriction	150mm CE [6in. WG]
	Engine air flow	727L/s [1541cfm]
COOLANT SYSTEM	Radiator & engine capacity	95L [25.099gal]
	Max water temperature	103°C [217°F]
	Outlet water temperature	93°C [199°F]
	Fan power	17 kW
	Fan air flow w/o restriction	10m ³ /s [21191cfm]
	Available restriction on air flow	30mm CE [1.2in. WG]
	Type of coolant	Glycol-Ethylene
Thermostat	86-96 °C	
GAS SYSTEM	HC	0.08 g/KW.h
	CO	0.69 g/KW.h
	Nox	5.4 g/KW.h
	PM	0.083 g/KW.h



ALTERNATOR SPECIFICATIONS

GENERAL DATAS	Manufacturer / Type	LEROY SOMER LSA491S4
	Number of phase	3
	Power factor (Cos Phi)	0.8
	Altitude	< 1000 m
	Overspeed	2250 rpm
	Pole : number	4
	Exciter type	AREP
	Insulation : class, temperature rise	H / H
	Voltage regulator	R448 LS/B
	Sustained short circuit current	3.6 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
	OTHER DATAS	Voltage regulation 0 to 100% load
Recovery time (20% Volt dip) ms		500 ms
SkVA with 90% of nominal sustained voltage (at 0.4PF)		skva
Continuous nominal rating @ 40°C		660 kVA
Standby rating @ 27°C		725 kVA
Efficiencies @ 4/4 load		93.6 %
Air flow		1m3/s [2118.87cfm]
Short circuit ratio;50 (Kcc)		0.38
Direct axis synchro reactance unsaturated (Xd)		343 %
Quadra axis synchro reactance unsaturated (Xq)		205 %
Open circuit time constant;50 (T'do)		1958 ms
Direct axis transient reactance saturated (X'd)		17.5 %
Short circuit transient time constant (T'd)		100 ms
Direct axis subtransient reactance saturated (X''d)		14 %
Subtransient time constant (T''d)		10 ms
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)	15 ms	
No load excitation current (io)	0.9 A	
Full load excitation current (ic)	ic	
Full load excitation voltage (uc)	43 V	
Recovery time (Delta U = 20% transitoire)	500 ms	
Motor start (Delta = 20% perm. Or 50% trans.)	1578 kVA	
Transient dip (4/4 charge) – PF : 1.8 AR	13.3 %	
No load losses	8.1kW [8.10Kw]	
Heat rejection	33.7 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...