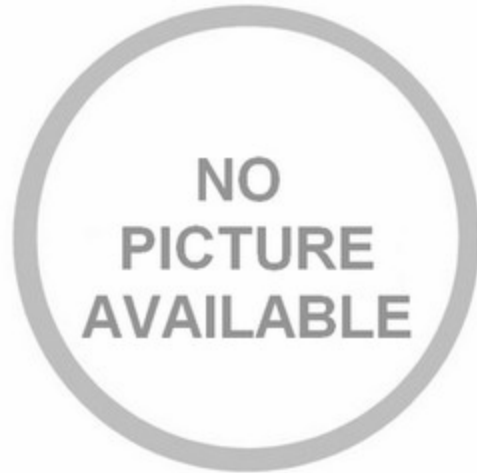


V700C2

Stage 2
 Engine VOLVO , TWD1643GE
 Alternator LEROY SOMER , LSA491S4

STANDARD FEATURES

- Compliant with stage 2 of the european pollutant emissions directive
- Electronic governor
- Mechanically welded chassis with antivibration suspension
- Power circuit breaker
- Radiator for wiring T°of 50°C [122°F] max with mechanical fan
- Protective grille for fan and rotating parts
- 9dB(A) silencer supplied separately
- Charged DC starting battery with electrolyte
- 24 V charging alternator and starter
- Supplied with oil and coolant -30°C
- User manual and commissioning guide



Voltage	Power ESP kWe/kVA	Power PRP kWe/kVA	Standby Amps	Dimensions	Weight
415/240	560 / 700	509 / 636	974	Length: 3470mm [137in] Width: 1630mm [64in] Height: 2080mm [82in]	3890kg [8576 lbs] Net 4560kg [10053 lbs] Gross
400/230	560 / 700	509 / 636	1010		
380/220	553 / 691	503 / 628	1050		
240/120	558 / 697	507 / 634	1677		
230/115	535 / 669	487 / 608	1679		
220/110	511 / 639	465 / 581	1677		



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 40 °C Air Intlet Temp, 1500 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	85.2	75.2	Length: 5031mm [198in] Width: 1690mm [67in] Height: 2662mm [105in]	5410kg [11927lbs] Net 6090kg [13426lbs] Gross	610 L
 M230-DW	85.2	75.2	Length: 5083mm [200in] Width: 1690mm [67in] Height: 2922mm [115in]	6140kg [13536lbs] Net 7980kg [17593lbs] Gross	1950 L



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	144mm [5.7in.] X 165mm [6.5in.]
	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 temperature	450°C [842°F]
	Exhaust gas flow	1693L/s [3588cfm]
	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 [0.026gal/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 [25.1gal]
	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
EMISSIONS LEVEL	PM	0.083 g/KW.h
	CO	0.69 g/KW.h
	Nox	5.4 g/KW.h
	HC	0.08 g/KW.h



ALTERNATOR SPECIFICATIONS

GENERAL DATAS	Manufacturer	LEROY SOMER	
	Type	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	
	Total harmonics (TGH/THC)	< 4%	
	Wave form : NEMA = TIF – TGH/THC	< 50	
	Wave form : CEI = FHT – TGH/THC	< 2%	
	Bearing : number	1	
	Coupling	Direct	
	Voltage regulation 0 to 100% load	+/- 1%	
	Recovery time (20% Volt dip) ms	500 ms	
	SkVA with 90% of nominal sustained voltage (at 0.4PF)	N/A	
	OTHER DATAS	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)		3.6 A	
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

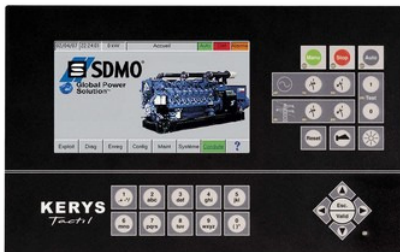
Standard



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...

