SOMMERS

Generator Systems

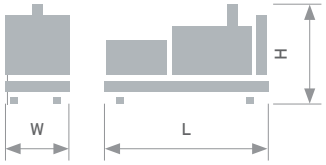
3YR or 3000Hr Limited Parts, Travel & Labour warranty

60Hz VOLVO TAD851GE EPA Tier 3

DGVW 200 ST T3

Measures:
L: 2975 mm H: 2140 mm
W: 1120 mm

Weight (dry):
4409 lbs / 2000 kg



Hz 60Hz | Diesel | Water cooled | Open | 1800 RPM | CSA Approved or Equivalent

1 Genset General Description

› Open genset with automatic startup, control card allows automatic, manual or signal start-up.

General Technical Data			
Engine	VOLVO TAD851GE		
Alternators	240/120V	Wdg. ·06	STAMFORD UCDI274K-w06
	208/120V	Wdg. w311	STAMFORD UCI274H
	480/277V	Wdg. w311	STAMFORD UCI274H
	600/347V	Wdg. w17	STAMFORD UCI274H
Performance Class	G3		
Frequency	60Hz		
Control Panel	DSE 7320 MKII		
Noise level (dBA@7m)	N/A (Indoor)		

Voltage (V)	PRP (KW)	ESP (KW)	PRP/ESP (A)
240/120V	200	200	833.3 / 833.3
208/120V	190	200	661.4 / 694.8
480/277V	204	220	307.1 / 331.2
600/347V	198	218	238.6 / 262.5

PRP: Continuous power (“Prime Power”) ISO 8528-1 standard.
ESP: Emergency power (“Emergency Standby Power”) ISO8528-1 standard.

2 Engine Specifications

› VOLVO TAD851GE Diesel engine, inline 6-cylinders, 4-stroke. Turbo-Charged aspiration, air intake system. Electronic regulation. Complying with EPA Tier 3 emissions.

Engine General Data			
Manufacturer/Model	VOLVO TAD851GE	Number of Cylinders	6 cylinders
R.P.M.	1800	Engine Capacity	7,7
Max. Power (kWm) (net)	248	Cooling System	Water cooled
Power PRP (Kwm) (net)	225	Regulation Type	Electronic
Fuel	Diesel	Engine Type/Injection/ Suction	Diesel /Direct/Turbo-Charged

2.1 Fuel Feed System

› Direct injection system, fuel filter included that prevents the passage of particles, original parts from the engine manufacturer.

50% PRP	31.2 l/h (8.2 US gals/h)	75% PRP	45.2 l/h (11.9 US gals/h)
100% PRP	58.9 l/h (15.6 US gals/h)	110% ESP	64.4 l/h (17.0 US gals/h)

2.2 Cooling System

› Cooling by fully distributed coolant in a closed circuit driven by a pump activiated by the engine. Tropicalized radiator. Original parts from the engine manufacturer.

6.2	26.8 (20.0)	41.0	1500W 120V
Fan Airflow (m^3/s @ 69.2°C)	Fan Power Consumption hp (kW)	Engine + Radiator Capacity (l)	Blockheater (W/V)

2.3 Lubricating System

› Lubrication system is driven by the crankshaft driven pump. Filter on top with full flow cartridge inserted, front crankcase. Original parts from the engine manufacture.

Total Oil Capacity 25L With oil pressure reading sensor

2.4 Air Intake System

› Direct air intake system including two-stage filter. Original parts from the engine manufacturer.

Combustion Air Volume 23.5 m³/min

2.5 Start System

› Start system by electric motor. battery (without maintenance) with disconnector and charging alternator driven by the starter motor 24V, original parts from the engine manufacturer.

Number of Batteries	2	Battery Features	4D-9	Starting Voltage	24V

2.6 Exhaust System

› Attenuation level -10dB(A). Complying EPA Tier 3 emissions.

Exhaust System	
Exhaust Gas Volume	54.5 m³/min
Exhaust Gas Temperature	440 ºC
Exhaust External Diameter	Ø101.6 (4")
Max. Exhaust Backpressure	10kPa

3 Alternator Specifications

› Alternator STAMFORD 4-poles, brushless, alternator with class H insulation wound at 2/3 pitch and self-excited automatic voltage regulator (AVR).

Alternator General Data	240/120V	208/120V	480/277V	600/347V
Brand/Model	STAMFORD UCDI274K-w06	STAMFORD UCI274H	STAMFORD UCI274H	STAMFORD UCI274H
Winding No.	·06	w311	w311	w17
Voltage Regulator AVR	MX341	MX341	MX341	MX341
Voltage Regulator	±1%	±1%	±1%	±1%
ESP Power Rating 40ºC (kW)	200.0	200.0	220.0	220.0
PRP Power Rating 40ºC (kW)	200.0	190.0	204.0	255.0
Number of Phases	1	3	3	3
Power Factor (cos φ)	1	0.8	0.8	0.8
Efficiency at 100% Load	91.7%	93.0%	93.6%	93.6%
Efficiency at 110% Load	91.5%	92.8%	93.4%	93.4%

The alternator complies with the following standards:

- Class H temperature rise 125ºC (257ºF), Standby (ESP).
- Class H temperature rise 105ºC (302ºF), Prime (PRP).
- AS 1359
- IEC 34-1
- BS EN 60034-1
- VDE 0530
- BS 5000
- CAN/CSA-C22.2-100
- NEMA MG1-32

Low wave distortion: THD (100% load) = 2%, THF < 2%, Complying with EN61000-6-3, EN61000-6-2 standards on radio interference.

DGVW 200 ST T3

4 Bench Specifications

- Engine and alternator mounted on a high strength steel frame and painted with electrostatic epoxy polyester powder paint. Frame is tested in saline mist chamber to conform to ASTM B-117-09 for 500 hours. Engine and Alternator are mounted on rubber isolators to help dampen vibration while running.

6 Control Panel

- The control panel protects the engine and generator and allows for manual and automatic control of the genset.

6.1 Main Line Breaker

- Main line circuit breaker: A thermo-magnetic breaker provides protection against short circuits and overloads.

240/120V	800 Amps, Adj.	**208/120V**	800 Amps, Adj.
480/277V	400 Amps, Adj.	**600/347V**	250 Amps, Fixed

6.2 Control Panel Features

- **Emergency Stop Push Button**
- **DeepSea Battery Charger**

  Permanently connected to the battery to keep the battery fully charged. Charger is equipped with a float feature to keep battery ready in a prime starting state.
- **Panel Fusing**

  Fusing to protect the control panel wiring and accessories.

6.3 Control Card

DSE 7320 MKII

Features of the DSE 7320 MKII Card:

- 132X64 pixel illuminate LCD display
- Full engine/alternator parameter and alarm read out
- 5-button menu navigation
- One touch Auto-Manual-Test and Stop buttons
- 9 factory configurable outputs
- 8 factory configurable inputs
- Programmable PLC for custom application
- Remote communication through an RS232 or RS485 connection
- Utility sensing Option

The control card complies with the following environmental tests:

- BS EN 61000-6-2 (electromagnetic compatibility)
- BS EN 61000-6-4 (electromagnetic compatibility)
- BS EN 60950 (electrical safety)
- BS EN 61000-6-2 (Temperature)
- BS EN 60068-2-6 (Vibration)
- BS EN 60068-2-30 (Humidity)
- BS EN 60068--2-27 (Shock)

6.4 Display

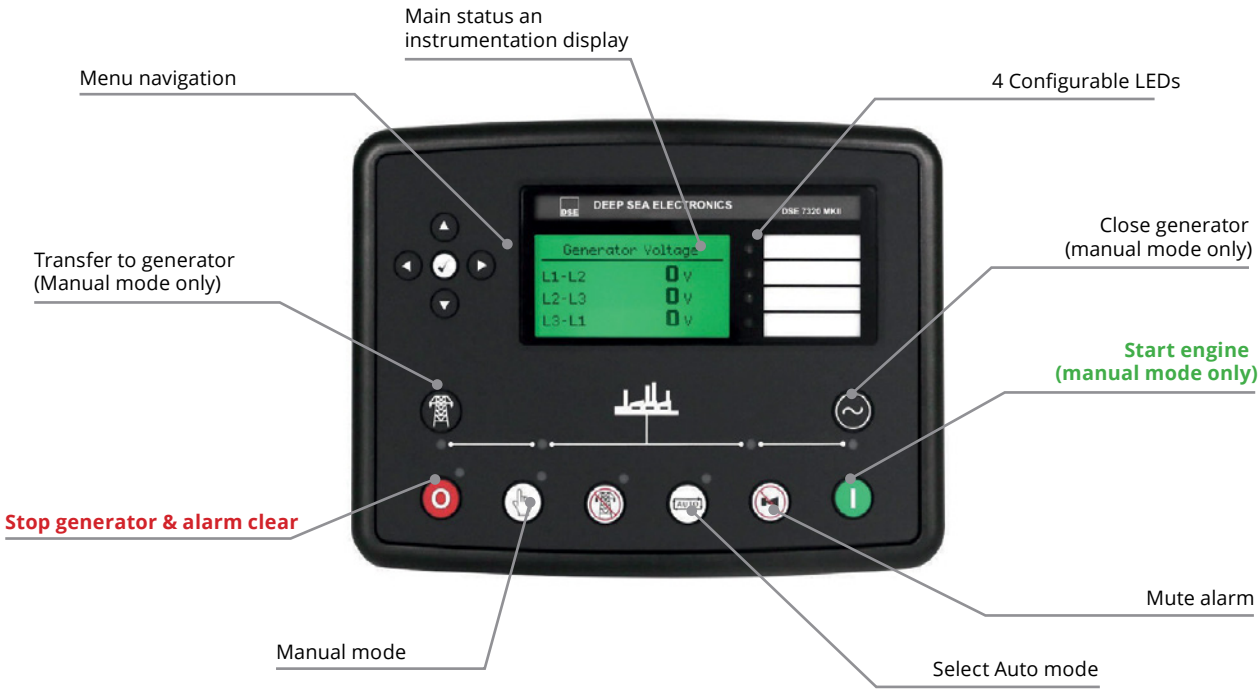
Control card for all Voltages:
DSE 7320 MKII

Engine	
Engine Speed	Engine Hours
Oil Pressure	Number Engine Starts
Battery Voltage	Fuel Consumption
Fuel level	Engine Temperature

Generator	
Voltage (L-N)	Voltage (L-L)
Frequency	Amperage
Power Factor	Load (kW, kVA, kVah)

Mains
Voltage (L-N)
Voltage (L-L)
Frequency

Alarm Detected	
Overcrank	High Engine Temp.
Low Oil Pressure	Low Engine Temp.
Low Coolant Level	Low Fuel Level
Low Plant Battery Voltage	Main Line Breaker
Over Voltage	Over Frequency
Under Voltage	Over Speed
Control Not In Auto	Lamp Test Features
Radiator level sender	



Gensets rated for operational ambient temperature of 40 C, in compliance of CSA C282-15. If ambient temperature exceeds 40 C, please contact sales representative for derating information. Emergency standby power(ESP): the maximum power available for which a genset is delivering in the event of a utility power outage or under test conditions for up to 200hours per year. Prime Power(PRP): the maximum power which a genset is capable of delivering continuously for an unlimited number of hours per year.