

### DGCSW 825 ST T2

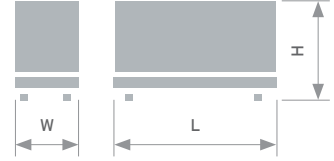


#### Measures:

L: 5600 mm H: 2330 mm  
W: 1910 mm

#### Weight (dry):

18078 lbs / 8200 kg



60Hz



Diesel



Water cooled



Soundproofed



1800 RPM



CSA Approved or Equivalent

## 1 Genset General Description

> Soundproofed genset with automatic startup, control card allows automatic, manual or signal start-up.

General Technical Data			
Engine	CUMMINS QSK23-G7		
Alternators	480/277V	Wdg. w311	STAMFORD S6L1D-C
		Wdg. w7	STAMFORD S6L1D-C
Performance Class	G2		
Frequency	60Hz		
Control Panel	DSE 7320 MKII		
Noise level (dBA@7m)	74		

Voltage (V)	PRP (KW)	ESP (KW)	PRP/ESP (A)
480/277V	734	821	1105.5 / 1235.5
600/347V	735	822	885.4 / 989.4

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

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## 2 Engine Specifications

› CUMMINS QSK23-G7 Diesel engine, inline 6-cylinders, 4-stroke. Turbo-Charged aspiration, air intake system. Electronic regulation. Complying with EPA Tier 2 emissions.

Engine General Data			
Manufacturer/Model	CUMMINS QSK23-G7	Number of Cylinders	6 cylinders
R.P.M.	1800	Engine Capacity	23
Max. Power (kWm) (net)	868.0	Cooling System	Water cooled
Power PRP (Kwm) (net)	776.0	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	102.0 l/h (26.9 US gals/h)
100% PRP	186.0 l/h (49.1 US gals/h)

75% PRP	145.0 l/h (38.3 US gals/h)
110% ESP	209.0 l/h (55.2 US gals/h)

### 2.2 Cooling System

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



Fan Airflow  
(m<sup>3</sup>/s)



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 143L**

 With oil pressure reading sensor

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#### 2.4 Air Intake System

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

**Combustion Air Volume 1072 l/s**

#### 2.5 Start System

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

**Number of Batteries**

**2**

**Battery Features**

**8D-9**

**Starting Voltage**

**24V**

#### 2.6 Exhaust System

› Attenuation level -35dB(A). Complying EPA Tier 2 emissions.

Exhaust System	
Exhaust Gas Volume	2691 l/s
Exhaust Gas Temperature	520 °C
Exhaust External Diameter	Ø152.4 (6")
Max. Exhaust Backpressure	10.2kPa

### 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	480/277V	600/347V
Brand/Model	STAMFORD S6L1D-C	STAMFORD S6L1D-C
Winding No.	w311	w7
Voltage Regulator AVR	MX321	MX321
Voltage Regulator	±0,5%	±0,5%
ESP Power Rating 40°C (kW)	835.2	836.8
PRP Power Rating 40°C (kW)	800.0	1000.0
Number of Phases	3	3
Power Factor (cos φ)	0.8	0.8
Efficiency at 100% Load	94.6%	94.7%
Efficiency at 110% Load	94.5%	94.6%

**The alternator complies with the following standards:**

- Class H temperature rise 125°C (257°F), Standby (ESP).
- Class H temperature rise 105°C (302°F), 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.

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#### 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.



#### 5 Canopy Specifications

- › Canopy made of high strength galvanized steel and is painted with electrostatic epoxy polyester paint. Canopy is lined with acoustical/fireproof rock wool. A critical exhaust muffler -35dB(A) is installed to dampen exhaust noise. All is tested in a saline mist chamber to conform with ASTM B-117-09 for 720 hour.



#### 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.

480/277V 1200 Amps, Adj.

600/347V 1000 Amps, Adj.

##### 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)

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#### 6.4 Display

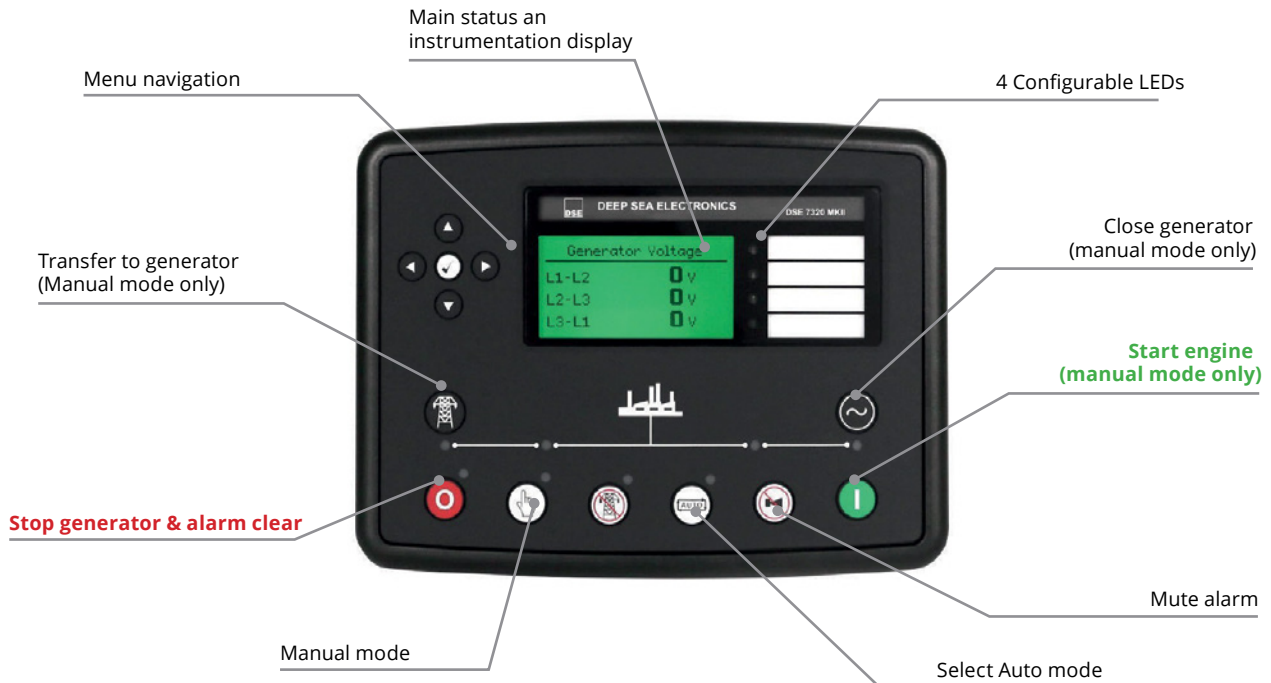
#### Control card for all Voltages: DSE 7320 MKII

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.