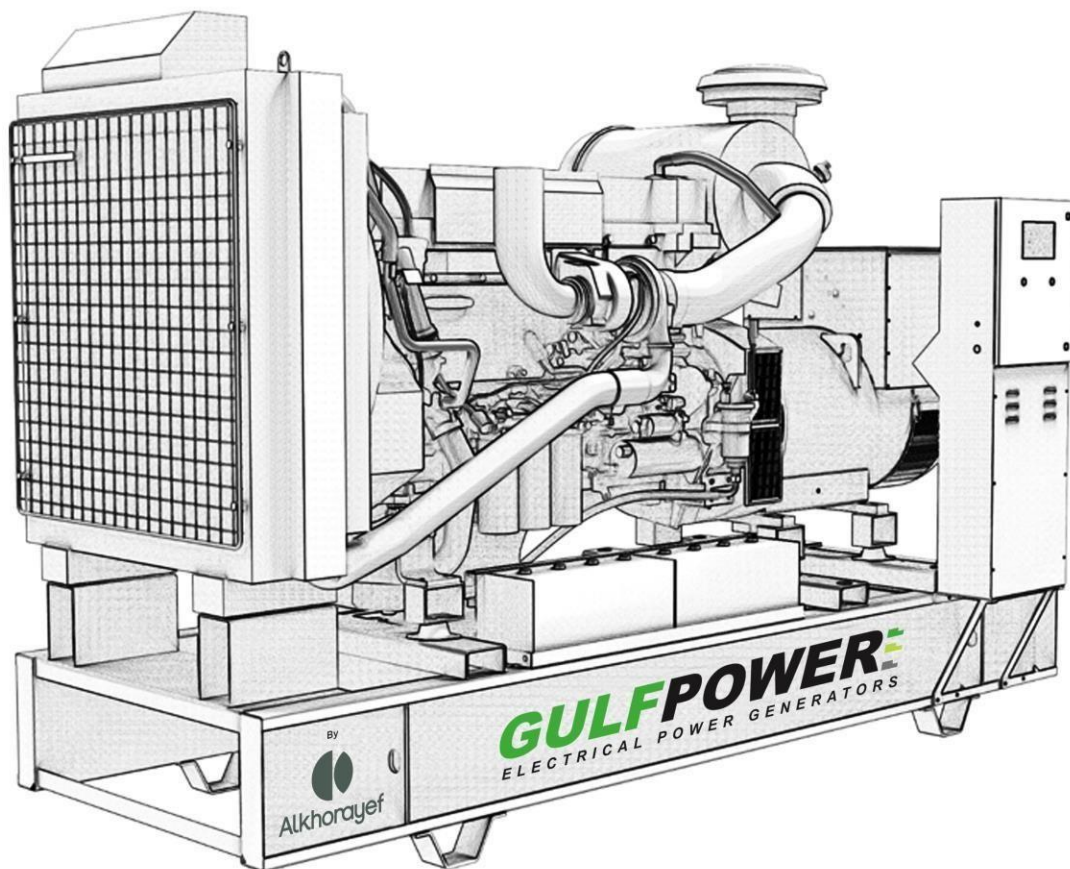




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Alkhorayef Commercial



Quality  
ISO 9001



## GPC1100-50

	Standby kVA	Standby kW	Prime kVA	Prime kW
440V	1100	880	1000	800
415V	1100	880	1000	800
380V	1090	872	1000	800
220V	1100	880	1000	800



## Standard Features

- **Single Source Responsibility**

Alkhorayef Co. provides one-source responsibility for the Diesel Generator Sets and accessories

- **Reliability**

We provide powerful and reliable diesel generator sets with economical fuel consumption

- **Durability**

Rugged 4-cycle industrial diesel engine delivers reliable power, low emissions and fast response to load changes

- **Ease of Installation**

Diesel Generator Sets are designed for the easiest, fastest and economical installation

- **Comprehensive Warranty**

Diesel Generator Sets are backed up by 2 years warranty for standby application and 1 year prime application. Please see manufacturer's warranty statement.

## Ratings Definition

### **Emergency standby power (ESP)**

Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

### **Prime power (PRP)**

Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.



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**Application Data**

## **ENGINE SPECIFICATION**

Engine Manufacturer	Cummins
Engine Model	QST30-G4
Engine Speed	1500 RPM
Engine Output Standby / Prime	1112 kWm (1490 bhp) / 1007 kWm (1350 bhp)
Engine Type	4-Cycle; 50° Vee; 12-Cylinder Diesel
Aspiration	Turbocharged-Low Temperature Aftercooled
Bore and Stroke	5.51 inch x 6.50 inch (140mm x 165mm)
Displacement	1860 inch <sup>3</sup> (30.48 litre)
Compression Ratio	14.0 : 1
Dry Weight – Fan to Flywheel Engine (Approximate)	6640 lb (3012 kg)
Wet Weight – Fan to Flywheel Engine (Approximate)	6860 lb (3112 kg)
Center of Gravity from Rear Face of Block	33.3 inch (845 mm)
Center of Gravity Above Crankshaft Centerline	7.7 inch (195 mm)
<b>EXHAUST SYSTEM</b>	
Maximum Back Pressure	2 inch Hg (51 mm Hg)
<b>AIR INDUCTION SYSTEM</b>	
Maximum Intake Air Restriction	
with Clean Filter Element	15 inch H <sub>2</sub> O (381 in H <sub>2</sub> O)
with Dirty Filter Element	25 inch H <sub>2</sub> O (635 in H <sub>2</sub> O)
<b>COOLING SYSTEM</b>	
Coolant Capacity	
Engine Only	79 litre (21 US Gal)
After Coolers	12 litre (3.2 US Gal)
<b>Jacket Water Circuit Requirement</b>	
Maximum Coolant Friction Head External to Engine	69 kPa (10 psi)
Maximum Static Head of Coolant Above Engine crank	14m (46ft)
Maximum Top Tank Temperature for Standby/ Prime	104 °C (220°F) / 100 °C (212°F)
Standard Thermostat (Modulating Range)	180 - 200 °F (82 – 93 °C)
<b>LUBRICATION SYSTEM</b>	
Oil Pressure @ idle Speed (minimum)	24 psi (166 kPa)
Oil Pressure @ Governed Speed (minimum)	45-56 psi (310-386 kPa)
Maximum Oil Temperature	250 °F (121 °C)



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Oil Capacity with OP 5133 Oil Pan High / Low	133 litre (35 US Gal) / 114 (30 US Gal)
Total System Capacity	154 litre (40.7 US Gal)

### FUEL SYSTEM

Type Injection System	Bosch P8500 LLA Direct Injection
Maximum Restriction at lift Pump with Clean Fuel Filter	102 mm Hg (4.0 inch Hg)
Maximum Restriction at lift Pump with Dirty Fuel Filter	203 mm Hg (8.0 inch Hg)
Max restriction of Engine Fuel filter Head and Clean fuel filter	229 mm Hg (9.0 inch Hg)
Maximum Fuel Inlet Temperature	150 °F (71 °C)
Maximum Return Flow	145 US gph (550 litre/hr)

### ELECTRICAL SYSTEM

Cranking Motor (Heavy Duty, Positive Engagement)	24 Volt
Maximum Allowable Resistance of Cranking Circuit	0.002 ohm
Minimum Recommended Battery Capacity	
Cold Soak @ -10°C and above	1200 CCA
Cold Soak @ 0°C to 10°C	1280 CCA
Cold Soak @ -18°C to 0°C	1800 CCA

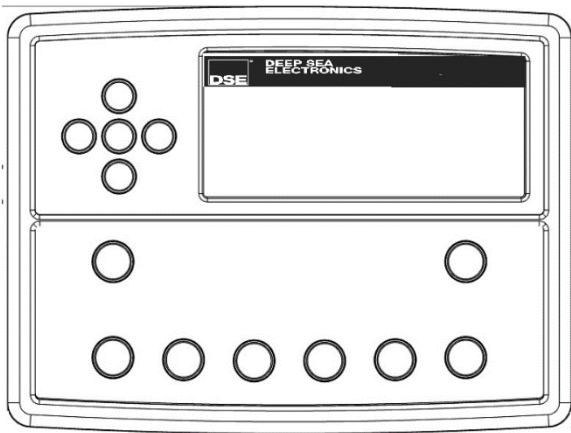
### COLD START CAPABILITY

Minimum Ambient Temperature for Cold Start with 8000 Watt Coolant Heater to Related Speed	20°F (-7 °C)
Minimum Ambient Temperature for Unaided Cold Start to Idle Speed	45°F (7 °C)
Minimum Ambient Temperature for NFPA 110 Cold start (90 °F Minimum Coolant Temperature)	32°F (0°C)

## ALTERNATOR SPECIFICATION

Insulation System	Class H
Protection	IP23
Rated Power Factor	0.8
Stator Winding	Double Layer Concentric
Winding Pitch	Two Third
Maximum Over speed	2250 RPM

# CONTROL PANEL

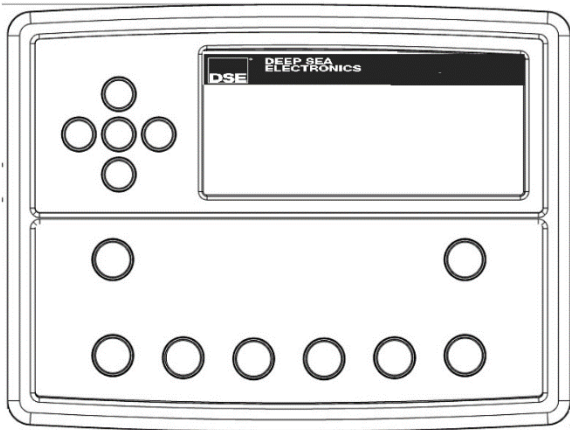


## DSE7310

This controller is easy to use and feature an intuitive user interface with graphic display. The built-in event and performance log with backed-up real time clock makes troubleshooting even simpler.

- 4-Line back-lit LCD text display
- Power monitoring (kW h, kV Ar, kV A h, kV Ar h)
- Front panel editing with PIN
- Communication Interfaces
- Configurable timers and alarms

Please refer to Data Sheet for details

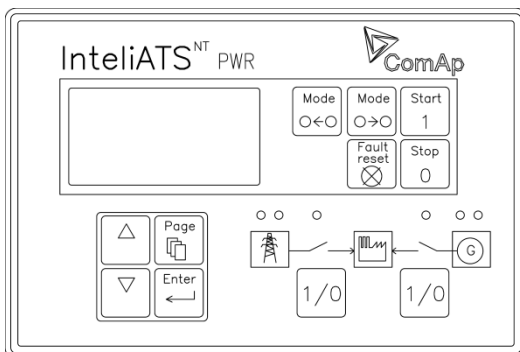


## DSE 8610

DSE 8610 is comprehensive controller for both single and multiple gen-sets operating in standby or parallel modes.

- Comprehensive synchronising & loadsharing capabilities
- Base load (kW export) functionality
- Positive & negative kVAr export control
- Mains (utility) de-coupling protection
- Generator power (kW, kV Ar, kV A & pf) monitoring
- Overload (kW & kV Ar) protection
- Reverse power (kW & kV Ar) protection
- Unbalanced load protection

Please refer to Data sheet for details.



## InteliATS<sup>NT</sup>

These controllers are designed to monitor the incoming AC mains supply (1 or 3 phases) for under voltage, over voltage, under frequency, over frequency and voltage unbalance.

- 3 phase AMF Function
- 3 phase generator protections
- True RMS current measurement
- Power Measurements
- Event Performance log + RTC
  - User Interface
- Inputs and outputs
- Communication Interfaces

Please refer to Data sheet for details



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## FUEL CONSUMPTION

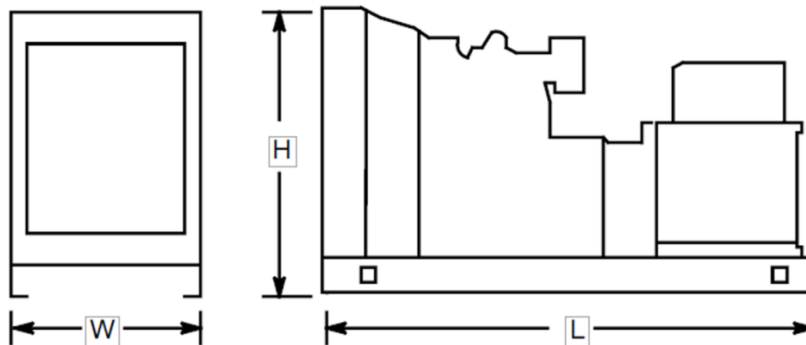
### Fuel Consumption 1500 rpm (50 Hz)

%	kWm	BHP	L/ph	US gal/ph
<b>Standby Power</b>				
100	970	1300	224	59.1
<b>Prime Power</b>				
100	880	1180	202	53.2
75	660	885	151	39.8
50	440	590	102	26.9
25	220	295	54	14.2
<b>Continuous Power</b>				
100	683	915	156	41.1

## DIMENSIONS AND WEIGHT

Overall Size, L x W x H, max., mm : 4571 x 1702 x 2937

Weight (radiator model), wet, max., kg : 7621



**NOTE:** This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.