



SPARTAN Power
Solutions



Industrial Range Doosan Series Model SD713 Generator set



General Performance Data

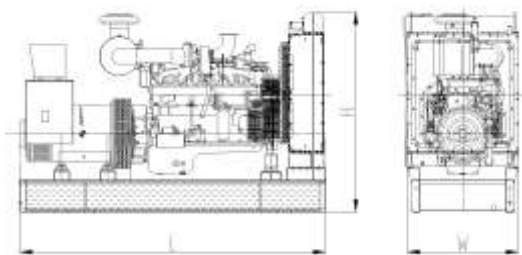
Prime Power	650KVA/520KW	Engine	Brand	Doosan
Stand by Power	713KVA/570KW		Model	DP222LB
Frequency/Speed	50Hz/1500rpm	Control module	Deepsea 8610	
Rated Power Factor(cosφ)	0.8	Rated Current	904A	
Standard Voltage	240V/415V	Capacity of Breaker	1000A	
Phases	3	Starting Voltage	DC24V	

Fuel consumption

Rated output	Fuel consumption rate	
100%Standby	*g/KW.h	162.7L/h
100%Prime	*g/KW.h	147.1L/h
75%Prime	*g/KW.h	109.2L/h
50%Prime	*g/KW.h	73.0L/h
25%Prime	*g/KW.h	39.2L/h

Standards followed

ISO9001	ISO14001
ISO8528	ISO12100
ISO13849	EN12601
GB12786	GB/T2820
IEC60034	IEC60204
CE	RETIE



Dimensions and Weights

Type	Open	Silent
Length(mm)	3500	4200
Width(mm)	1650	1950
Height(mm)	2250	2450
Weight(kg)	3850	4800
Base fuel tank volume (L)	1160	1160

Engine specification

Basic parameter

Manufacturer	Doosan
Model	DP222LB
No. of cylinder	12
Type	V-type 4 cycle, water cooled
Prime Power	604kw /821HP
Standby Power	664kw /903HP
Induction system	Turbo charged & intercooled (air to air)
Governor	Electric
Bore x Stroke	128x142mm
Displacement	21.927L
Compression ratio	15:1
Oil Capacity(Total)	40L
Coolant Capacity(Engine only)	114L
Cranking Motor Voltage	DC24V

Fuel System

Type Injection system	Direct injection
Min. Allowable flow of fuel to fuel pump	630L/h

Lubrication system

Oil Pressure	
---Idle speed	Min 100kPa
---Rated speed	Min 250kPa
Max. allowable oil temperature	120°C
Oil Pan capacity - Low/High	27/40L
Total system capacity	*L
Angularity of oil pan-Front Down	10°

Air induction system

Maximum allowable intake air restriction	
---with clean filter element	2.16kPa
---with dirty filter element	6.23kPa

Intake Air alarm temperature

*°C

Exhaust system

Max. allowable back pressure	5.9kPa
Standard exhaust pipe diameter	127mm

Cooling system

Coolant capacity	
---Engine only	23L
---Total system	114L
---With heat exchanger	-
Standard thermostat(modulating) range	71-85 °C
Max. coolant temerature	100 °C
Max. allowable top tank temerature for stand by/prime power	103 °C

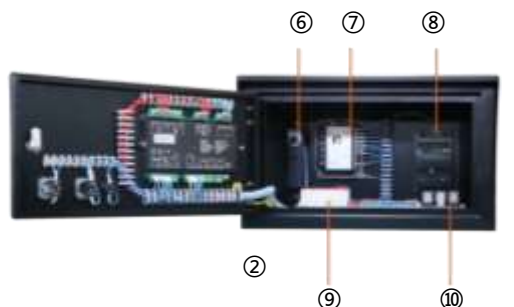
Electric system

Min. recommended battery capacity (12V)	
---10°C(50°F) & above- 0°F CCA	950A
--- 0°C(32°F) to 10°C(50°F)- 0°F CCA	950A
---18°C(0°F) to 0°C(32°F)- 0°F CCA	950A
Battery capacity(recommended)	2X200AH
Starter(heave,Anode)	DC24V
Battery recharge system, negative ground	45ampere

Alternator specification

Phases	3	Coating	Vacuum impregnation
Poles	4	Insulation class	H
Power factor(cosφ)	0.8	Protection	IP23
Winding connection	Star	Excitation system	Self-excited
Winding pitch	2/3	Bearing	Single Bearing
Voltage regulator type	AVR	Coupling	Flexible disc

Deepsea 8610 Auto start & auto mains failure control panel



KEY FEATURES

- Comprehensive synchronising & loadsharing capabilities
- Built in governor and AVR control
- Base load (kW export) control
- Positive & negative kVAr export control
- Mains (Utility) decoupling protection
- 4-Line back-lit LCD text display
- Multiple Display Languages
- Five key menu navigation
- LCD alarm indication
- Heated display option available
- Customisable power-up text and images
- DSENet expansion compatibility
- Data logging & trending facility
- Internal PLC editor
- Protections disable feature
- Fully configurable via PC using USB, RS232, RS485 & Ethernet communication
- Front panel configuration with PIN protection
- Power save mode
- 3 phase generator sensing and protection
- Generator current and power monitoring (kW, kvar, kVA, pf)
- kW and kvar overload alarms
- Reverse power alarms
- Over current protection
- Unbalanced load protection
- Independent earth fault protection
- Breaker control via fascia buttons
- Fuel and start outputs configurable when using CAN
- 8 configurable DC outputs

- 2 configurable volt-free relay outputs
- 4 configurable analogue/digital inputs
- Built in sensors to support 0 V to 10 V & 4 mA to 20 mA
- 12 configurable digital inputs
- Configurable 5 stage dummy load and load shedding outputs
- CAN, MPU and alternator frequency speed sensing in one variant
- Real time clock
- Manual and automatic fuel pump control
- Engine run-time scheduler
- Fuel usage monitor and low fuel level alarms
- Simultaneous use of all communication ports
- Remote SCADA monitoring via various DSE software applications
- MODBUS RTU & TCP support with configurable MODBUS pages for integration into building management systems (BMS)
- Advanced SMS messaging (additional external modem required)
- Start & stop capability via SMS messaging
- 3 configurable maintenance alarms
- Compatible with a wide range of CAN engines, including tier 4 engine support
- Uses DSE Configuration Suite PC Software for simplified configuration

KEY BENEFITS

- Compatible in load share systems containing DSE5500, DSE7500, DSE8000 and DSE8600 MKII series. Contact DSE for further details
- 132 x 64 pixel ratio display for clarity
- Real-time clock provides accurate event logging
- Ethernet communication, provides built in advanced remote monitoring.
- Can be integrated into building management systems (BMS) and programmable logic control (PLC)
- Increased input and output expansion capability via DSENet®
- Licence-free PC software
- IP65 rating (with supplied gasket) offers increased resistance to water ingress
- Advanced Internal PLC editor allows user configurable functions to meet specific application requirements.

Soundproof Canopy Introduction:

Standard Type :

- The arc angle structure makes the appearance beautiful and not easy to bump
- High quality coating powder, chemical surface treatment & 100-120um coating thickness greatly improving the anti-corrosion and anti rust level
- Stainless steel hinge & door lock are beautiful and anti-rust
- 2.0mm cold rolled plate used makes the body more solid
- The bottom forklift and loading port design enables easy loading and unloading
- The drainage outlets are all connected to the outside for easy operation
- The sufficient air in & out design ensure long-term and stable operation of the unit
- Isolation net is designed for air inlet, exhaust outlet and muffler outlet to prevent objects from entering the unit
- High density foam used inside effectively reduces noise
- Ceiling Lighting is equipped for easy operation
- The built-in base fuel tank with fuel filler set on the shell facilitates refueling
- Models above medium power range are designed with top hoisting mechanism to facilitate transportation of the unit.

Imitated container type :

- The shell is made of 3.0mm hot rolled steel plate so as to withstand the lifting capacity of 15-ton without deformation
- The switch cabinet and control panel are respectively set on both sides of the shell for easy maintenance & operation
- The shell looks similar to standard container, and can be loaded into 40HQ container for transportation, which is convenient for shipping
- The lifting eye holes are designed on the top same as the standard container for easy handling
- High density foam used inside effectively reduces noise
- The built-in base fuel tank with fuel filler set on the shell facilitates refueling
- Double emergency stop button set on different surfaces enables quick response to operation requirements
- The shell base is independent from the unit with 3mm thick checkered steel plate floor, which is beautiful & antiskid, and is convenient for overhaul & maintenance of the unit
- The door handle, lock and hinge are all made of stainless steel to avoid rusting
- The air out louver made of the mesh plate with podwer coating and pasted with high-density glass fiber is beautiful and not easy to rust, and can further reduce the noise
- Isolation net is designed for air inlet, exhaust outlet and muffler outlet to prevent objects from entering the unit
- The sufficient air in & out design ensure long-term and stable operation of the unit
- The drainage outlets are all connected to the outside for easy operation
- Ceiling Lighting is equipped for easy operation

Standard container type :

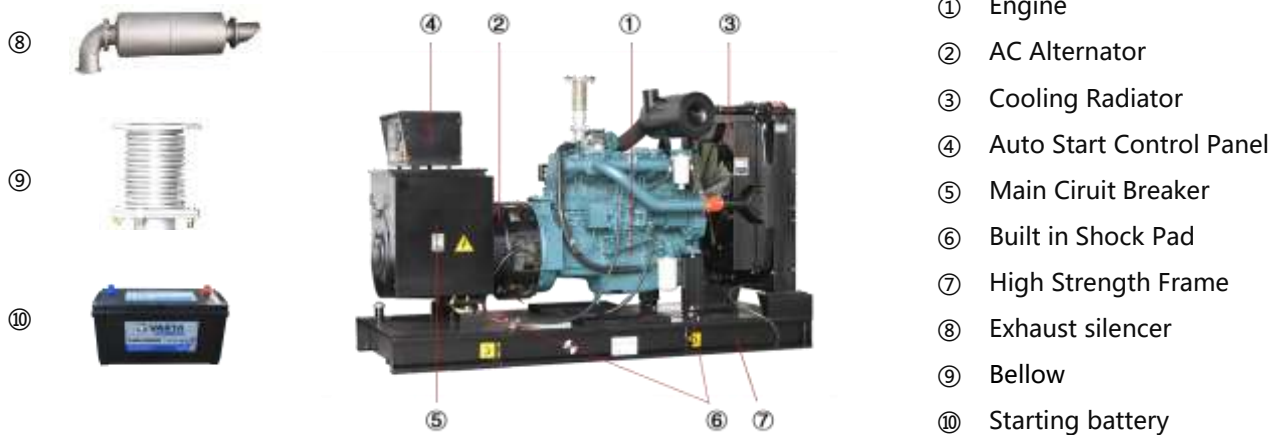
- Can be shipped on board directly during transportation
- The mesh plate with podwer coating and inner pasted with high-density glass fiber is installed inside the shell, which is beautiful and anti-rust, and can further reduce the noise
- 3mm thick checkered steel plate floor is beautiful & antiskid, and is convenient for overhaul & maintenance of the unit
- Double emergency stop button set on different surfaces enables quick response to operation requirements
- The independent daily fuel tank can be designed to put inside to meet requirements of continuous operation
- The fuel filler is set on the shell to facilitate refueling
- The switch cabinet and control panel are respectively set on both sides of the shell for easy maintenance & operation
- The air in & out louver made of the mesh plate with podwer coating and pasted with high-density glass fiber is beautiful and not easy to rust, and can further reduce the noise
- Isolation net is designed for air inlet, exhaust outlet and muffler outlet to prevent objects from entering the unit
- The sufficient air in & out design ensure long-term and stable operation of the unit
- The drainage outlets are all connected to the outside for easy operation
- Ceiling Lighting is equipped for easy operation



Decomposition diagram introduction of Typical Canopy



Standard supply scope:



Optional supply scope:

Genset	Engine	Alternator	Control system
<ul style="list-style-type: none"> • Tool box • Base fuel tank • External daily fuel tank • Trailer 	<ul style="list-style-type: none"> • Fuel heater • Fuel and water separator 	<ul style="list-style-type: none"> • Temp. detector for winding and bearing • PMG • Antirust, mildew and salt fog treatment • Anti condensation heater 	<ul style="list-style-type: none"> • ATS • Synchronization System • Adjustable earth relay
Breaker	Fuel system	Lub-oil system	Cooling system
<ul style="list-style-type: none"> • ABB • Schneider 	<ul style="list-style-type: none"> • Low fuel level alarm • Auto Fuel Pump • T Valve 	<ul style="list-style-type: none"> • Lub oil heater • Temp.-sensor • Oil drain Pump 	<ul style="list-style-type: none"> • Elec.coolant Heater



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