



SPARTAN Power
Solutions



Industrial Range

Model SS22

Generator set



General Performance Data

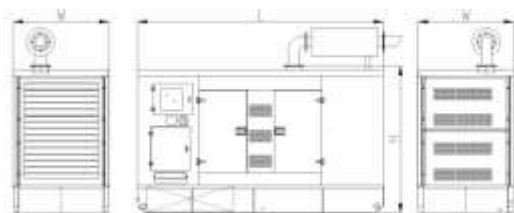
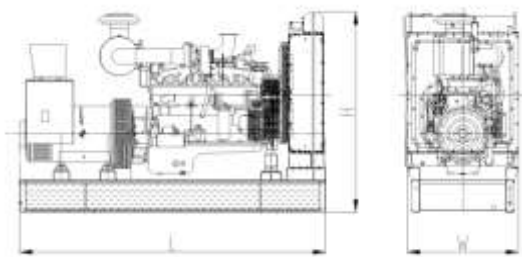
Prime Power	20KVA/16KW	Engine	Brand	SDEC
Stand by Power	22KVA/18KW		Model	4Z2.7-G11
Frequency/Speed	50Hz/1500rpm	Control module	Deepsea 4520	
Rated Power Factor(cosφ)	0.8	Rated Current	27A	
Standard Voltage	415V	Capacity of Breaker	63A	
Phases	3	Starting Voltage	DC12V	

Fuel consumption

Rated output	Fuel consumption rate	
100%Standby	/	5.13 L/h
100%Prime	/	4.68 L/h
75%Prime	/	3.6 L/h
50%Prime	/	2.6 L/h
25%Prime	/	1.64 L/h

Standards followed

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



Dimensions and Weights

Type	Open	Silent
Length(mm)		2020
Width(mm)		960
Height(mm)		1220
Weight(kg)		/
Base fuel tank volume (L)		57

Engine specification

Basic parameter

Manufacturer	SDEC Power
Model	4Z2.7-G11
No. of cylinder	4
Type	In-line,4 strokes, water-cooled
Prime Power	22kw
Standby Power	24Kw
Combustion type	Direct injection
Governor	Electronic speed
Bore x Stroke	90 × 105mm
Displacement	2.7L
Compression ratio	18:1
Firing order	1-3-4-2
Injection timing	14-17°

Fuel System

Injection pump	KangDa
Feed pump	Mechanical type

Lubrication system

Lub. Method	Fully forced pressure feed type
Oil pump	Gear type driven by crankshaft
Oil filter	Full flow, cartridge type
Oil pan capacity	High level 10 liters Low level 8 liters
Lub. Oil	Refer to Operation Manual

Alternator specification

Phases	3
Poles	4
Power factor(cosφ)	0.8
Winding connection	Star
Winding pitch	2/3
Voltage regulator type	AVR

ENGINEERING DATA

Heat rejection to coolant	10.6kcal/sec
Heat rejection to intercooler	
Air flow	2.3m3/min
Exhaust gas flow	8.9m3/min
Exhaust gas temp.	480 °C
Intake system	3kPa initial/4 kPa final
Exhaust system	10 kPa max.

Cooling system

Cooling method	Fresh water forced circulation
Water capacity (engine only)	2.7 liters
Pressure system	70kPa
Water pump	Centrifugal type driven by belt
Water pump Capacity	25liters /min
Thermostat	Wax-pellet type
Cooling fan	Blower type, plastic

The maximum temp. of coolant in prime/ Standby power

104/100°C

Electric system

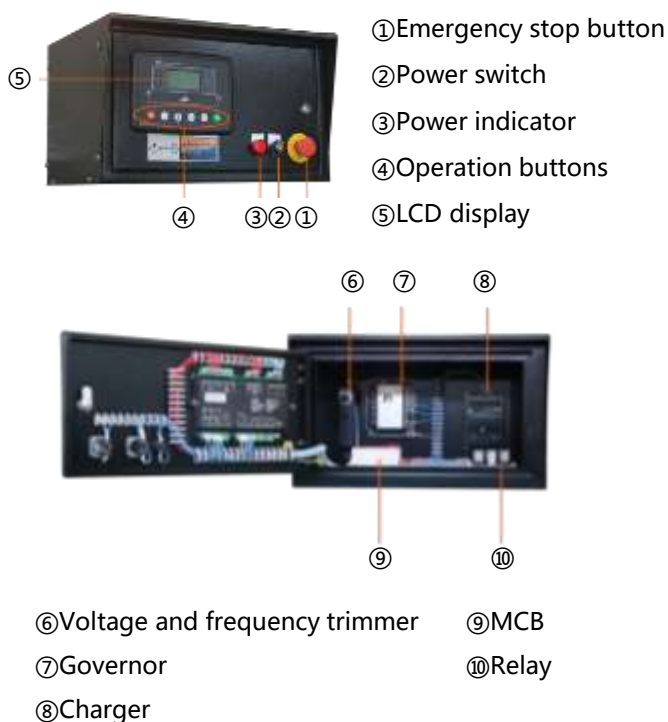
Charging generator	12V×70A
Voltage regulator	Built-in type IC regulator
Starting motor	12V×3.8kW
Battery Voltage	12V
Battery Capacity	110-120 AH

Coating	Vacuum impregnation
Insulation class	H
Protection	IP23
Excitation system	Self-excited
Bearing	Single Bearing
Coupling	Flexible disc

Control system Introduction

DSE 4510/20 MKII Auto start & auto mains failure control panel

Deepsea 4520 is an auto mains failure controller for single generator, it can monitor and protect the generator working all the time. it has a LCD display which clearly shows the status of the engine. this controller include seven inputs and six outputs. This controller can also be programmed using the front panel or by using DSE configuration Suite PC software



Key Features:

- Generator/load power monitoring (kW, kV A, kV Ar, pf)
- Accumulated power monitoring (kW h, kVA h, kVAR h)
- Generator overload protection (kW)
- Generator/load current monitoring and protection
- Fuel and start outputs (configurable when using CAN)
- 4 configurable DC outputs
- 3 configurable analogue/digital inputs
- 4 configurable digital inputs
- Configurable staged loading outputs
- 3 engine maintenance alarms
- Engine speed protection
- Engine hours counter
- Engine pre-heat
- Engine run-time scheduler
- Engine idle control for starting & stopping
- Tier 4 engine instrumentation screens
- Battery voltage monitoring
- Start on low battery voltage
- Configurable remote start input
- 1 alternative configuration
- Comprehensive warning, electrical trip or shutdown protection upon fault condition
- LCD alarm indication
- Event log (50)
- Fuel solenoid pulling circuit
- On-screen line diagram on/off functionality
- Configurable CAN instrumentation (10)
- Water in fuel digital input
- Tank bund alarm digital input
- Generator at rest output
- ECU periodic wake-up for information retrieval
- Back-light power-save mode
- Adjustable delay crank timer
- Pre/post heat functionality
- Overload protection
- Mains/generator A/C system selection
- Output timer for external audible alarm

Main features:

- KEY FEATURES
- Auto Start and AMF mode in one module (DSE4520 MKII only)
- J1939-75 support and CAN alarm ignore function
- Alternator frequency & CAN speed sensing in one variant
- Largest back-lit icon display in its class
- Heated display option
- Real time clock provides accurate event logging
- Fully configurable via the fascia or PC using USB communication
- Extremely efficient power save mode
- 3 phase generator sensing
- 3 phase mains (utility) sensing (DSE4520 MKII only)
- Compatible with 600 V ph to ph nominal systems



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 powder 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

Classics Economic series :

- Right angle around the canopy
- Carbon spray hinges and lock with rust proof
- The drainage & lubricating oil outlets are all connected to the outside for easy to maintain
- The air inlet and outlet are designed with grid structure of to prevent big objects from entering the canopy
- The lifting lug on the top for medium range genset makes easily and convenient transportation
- High-quality powder coated, chemical surface treatment & 80-120um coating thickness is highly durable against erosion and scratch
- The bottom forklift is built-in base frame for small range genset, with over stow capacity
- The fuel inlet on the canopy is for easy to fuel filling
- High-density sponge to effectively reduce noise

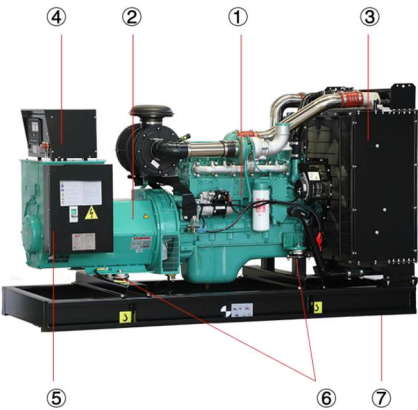


Classics Economic Canopy Sample Picture



Standard supply scope:

- ⑧
- ⑨
- ⑩



- ① Engine
- ② AC Alternator
- ③ Cooling Radiator
- ④ Auto Start Control Panel
- ⑤ Main Circuit Breaker
- ⑥ Built in Shock Pad
- ⑦ High Strength Frame
- ⑧ Exhaust silencer
- ⑨ Bellow
- ⑩ Starting battery

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





Spartan UK | Spartan China | Spartan UAE
Info@spartaneqp.com | www.spartaneqp.com

- Follow us @facebook.com/spartaneqp
- Follow us @linkedin.com/spartaneqp
- Follow us @spartaneqp

All information in the document is substantially correct at the time of printing but maybe subsequently altered by the company.

Distributed by



ENGINEERING SUPPLIES LTD.

