

# Technical Specification

## Model: **DS-20K-CSS**

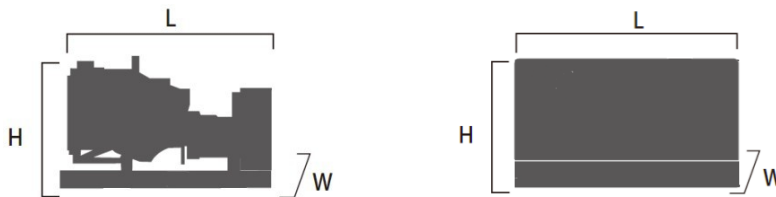
Powered by CUMMINS



### Applicable Standards

ISO 8528-5:2018  
GB/T2820.5-2009  
CE

General Information		Prime power	Standby power
Rated Power (kVA)		22	25
Power Rating (kW)		18	20
Frequency (Hz)		60	
Engine Model		4B3.9-G2	
Engine Speed (RPM)		1800	
Phase		3	
PF		0.8	
Control System		Digital	
Rated voltage (V)		120/208 (According to customer requirements)	
Fuel tank capacity operating time		≥ 8h @ 75% load	
Fuel Consumption (L/h)	110% load	9.4	
	100% load	8.6	
	75% load	6.8	
	50% load	5	



Dimension and Weight		
Model	DS-20K-CSO Open type	DS-20K-CSS Silent type
Length (L) mm	1950	2250
Width (W) mm	750	950
Height (H) mm	1420	1300
Dry weight (kg)	765	1150
Tank capacity (L)	90	90
The loading capacity (40'HC)	18 units	22 units

Note: Specifications and illustrations are subject to revision without notice.

### Environmental Conditions

Ambient temperature: +5°C~+40°C  
Altitude: ≤1000m  
Remark: If your conditions are different from the above, please contact our sales.

### Factory Inspection

Complete design and quality inspection  
0%, 25%, 50%, 75%, 100%, 110% load test.  
Function test.  
Protection test

### Painting Process

DS Power has the most advanced automatic spraying / powder coating production line, and is equipped with various sandblasting equipment to ensure higher quality.  
Canopy painting: Henkel pretreatment process and world famous brand AkzoNobel powder.  
Base Frame painting: Sandblasting process and AkzoNobel powder



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## Engine Specifications

Engine model & manufacturer		4B3.9-G2 (CUMMINS)
Emission Certification		-----
Number of cylinders		4
Cylinder arrangement		In line
Cycle		Four stroke
Aspiration		Naturally aspirated
Bore x Stroke		102x 120 mm
Displacement		3.9 L
Compression ration		18: 1
Prime power /speed		30kW /1800 rpm
Standby power /speed		33 kW /1800 rpm
Speed governor		Electronic
Cooling system		Forced Water Cooling Cycle
Frequency droop		≤3%
Total lubrication system capacity		10.9 L
Coolant capacity		7.2 L
Fuel consumption	100% load	238 g/kWh @1800 rpm
Starter motor		DC 24V
Charge alternator		DC 24V
<ul style="list-style-type: none"> <li>◆ Heavy duty diesel engine</li> <li>◆ Anti-vibration mount</li> <li>◆ Replaceable fuel filter, oil filter &amp; air filter</li> <li>◆ Cooling radiator and fan</li> </ul>		<ul style="list-style-type: none"> <li>◆ Starter battery (with lead acid) including rack and cables</li> <li>◆ Flexible fuel connection hoses</li> <li>◆ Exhaust silencer and bellows</li> <li>◆ Operation manuals and circuit diagram documents</li> </ul>

## Alternator Specifications

Alternator	PI.144G (STAMFORD)
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Insulation type	H class
Winding Pitch	2/3
IP rating	IP23
Bearing	Single bearing
Voltage regulator	A.V.R
Coupling	Flexible disc

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## Control Panel

**DSE6120MKII**

Auto Mains (Utility) Control Module



### Key benefits

- 6 Active DC Output
- 4 analog inputs/digital inputs
- 8-way custom digital input
- All expansion modules can be connected
- Can support 0-10V or 4-20mA oil pressure sensor
- With hierarchical loading function
- Support EFI and non-EFI engines
- 3 maintenance alarms can be set
- Engine speed protection
- Engine warm-up
- Multiple start-stop cycles can be preset

### Key features

- Built-in PLC logic programming
- 5 menu navigation keys
- Generator voltage detection
- mains voltage detection
- Generator/load power detection (kW, kVA, kVAR, pf)
- Generator overload protection (kW)
- Generator/load current monitoring and protection
- Power saving mode
- With manual closing and opening functions
- Fuel and start-up output can be flexibly defined when used in EFI engines
- Real-time clock
- Fuel pump control function
- Engine Start Rapid & Stop Rapid
- Battery voltage monitoring
- Start the unit when the battery voltage is low
- Custom remote start signal
- Two sets of protected winters can be preset
- Three types of alarm levels can be set: ordinary alarm, electrical trip and shutdown
- LCD and LED alarm indication
- 100 event records
- Optional low temperature version (-40°C)

## Options

Engine	Alternator	Fuel System	Generating Set
<input type="checkbox"/> Water Jacket Preheater <input type="checkbox"/> Oil Preheater <input type="checkbox"/> Oil manual pump	<input type="checkbox"/> PMG excitation <input type="checkbox"/> Space heater <input type="checkbox"/> Winding temperature measuring	<input type="checkbox"/> 12 / 24 hour base tank <input type="checkbox"/> Bunded fuel tank <input type="checkbox"/> External fuel tank <input type="checkbox"/> Automatic fuel feeding <input type="checkbox"/> Switch between external tank and base tank (three-way valve)	<input type="checkbox"/> Deepsea, ComAp, Smartgen etc. controller <input type="checkbox"/> Trailer <input type="checkbox"/> Tools with the machine

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