

# SHENZHEN ASAHI POWER TECHNOLOGY

## Technical Datasheet of Cummins CDL20SA Diesel Generator Set



Model Specs: Cummins 4B3.9-G1, Stamford PI 144E, Deepsea DSE6210

### GENERAL FEATURES:

Composed of Cummins Engine and Stamford, Marathon Alternator, Leroy-Somer, Engga

12V/24V DC starter motor and battery system

Brushless, Self-excited, IP23, insulation class H Alternator

Self enclosed water-cooling system, Steel Chassis

Key start panel control system as standard, digital auto start panel is optional

Optional 8-hours operation fuel tank or Base fuel tank

Optional open type or silent canopy, ATS, Sync system

All generating sets have gone through rigorous testing before delivery, including 50% load, 75%load, 100% load, 110% load and all protection function (over-speed stop, high water temp., low oil pressure, battery charging failure, emergency stop)

Criterion: ISO8528, GB/T2820, ISO3046, BS4999, BS5514, BS5000, EN12601:2001, EN60034-22:1997, EN60204-1:2006, ISO9001:2000 Quality Management & ISO14001:2004, SGS, TLC



### GENERAL MAIN TECHNICAL DATA

3 Phase, 50Hz@1500RPM, 400/230V (380/220V, 415/240V, 440/254V are optional)

Voltage	Phase Factor	Prime Power	Standby Power	Engine	Alternator	Control System
400/230V	3P/0.8	20 kw 25 kva	22 kw 27.5 kva	4B3.9-G1	PI144E	DSE6210

### WEIGHT AND DIMENSIONS

Gen-Set	Dimensions (L x W x H)	Weight (kg)
Open Type	1760 mm x 700 mm x 1370 mm	750 kg
Silent Type	2450 mm x 980 mm x 1800 mm	980 kg

### ENGINE SPECIFICATION

Engine Brand	Cummins
Engine Model	4B3.9-G1
Engine Type	4 Cylinders, in Line
Bore * Stroke (mm * mm)	102*120
Displacement	3.9 L
Prime Power	24kw/ 1500rpm
Standby Power	30kw/ 1500rpm
Aspiration	Naturally Aspirated
Cooling System	Water-cooled
Speed Stability	≤5%
Starting Method	Electric Starting
Governor Method	Mechanical Governor

## ALTERNATOR SPECIFICATION

Alternators are available for all applications. Stamford, Marathon, Leroy-Somer and Engga are available. According to their different functions, the control systems can be specified for key start controller model.

<b>Alternator Brand</b>	<b>Stamford</b>
<b>Alternator Model</b>	<b>PI 144E</b>
<b>Rated Voltage</b>	230/400V
<b>Frequency</b>	50 HZ
<b>Winding Connection</b>	3-phrase, 4-wire
<b>Power Factor (COS)</b>	0.8
<b>Exciting Method</b>	Brushless Self-exciting
<b>Insulation Class</b>	Class H
<b>Protection Class</b>	IP23
<b>Winding Pitch</b>	Two Thirds
<b>Voltage Regulator</b>	AVR
<b>Voltage Regulation</b>	$\leq \pm 1.0\%$
<b>Efficiency</b>	84.6% ~ 85.7%
<b>Waveform Distortion</b>	< 1.5% (no load)
<b>Maximum Overspeed</b>	2250 Rev/Min
<b>Telephone Interference (THF)</b>	< 2%

Alternators meet the requirement of BSEN 60034 and the relevant section of other international standards such as BS5000, VDE0530, NEMA MG1-32, IEC34, CSA22.2-100, AS1359, Other standards and certifications can be considered on request.

The 2/3 pitch design avoids excessive neutral currents. With the 2/3 pitch and carefully selected pole and tooth designs, ensures very low waveform distortion.

Brushless alternator with brushless pilot exciter for excellent load response. Class H insulation, easy to parallel with mains or other generators, standard 2/3 pitch stator windings avoid excessive neutral currents.

## CONTROL SYSTEM

Controllers are available for all applications. UK Deepsea, ComAp and SmartGen are available. By different functions, Control systems can be specified for key start control, automatic start control, PCRC three remote control.

### Standard: Deep Sea DSE6210 Digital Auto Start

Providing the standard functions as follows:

(Also can be made according to the customers' special requirements)

- ※ Start/Stop controller
  - ※ Ampere meter
  - ※ Voltmeter and selector switch
  - ※ Frequency/ Water temperature/ Oil pressure/ Hour counter/ Battery/ Voltage
  - ※ Emergency stop pushbutton
  - ※ Alarm System: Over speed, High Engine Temperature, Low Oil Pressure, Charge Failure
  - ※ Protection System: Over speed, High Engine Temperature, Low Oil Pressure, Emergency Stop.
- And the other protection function presetting

### Optional: Deep Sea DES6220 or Digital Auto Start (AMF) HGM170HC Key Start



DSE6210

## ASSEMBLY/ WARRANTY

1. Engine, Alternator coupled by SAE flange with full torsion analysis, No harmful vibration
2. Anti-vibration pads are used between the engine, alternator feet and the base frame.
3. All iron, steel surfaces have been treated by grit blast cleaning and coating. Then covered by special three layers painting which provides an excellent corrosion resistant surface.
4. ASAHI provides one-source responsibility for the generator, with 12 months guarantee.

## OPTIONAL PARTS



Circuit Breaker



Parallelling system



ATS



Super Silent Canopy