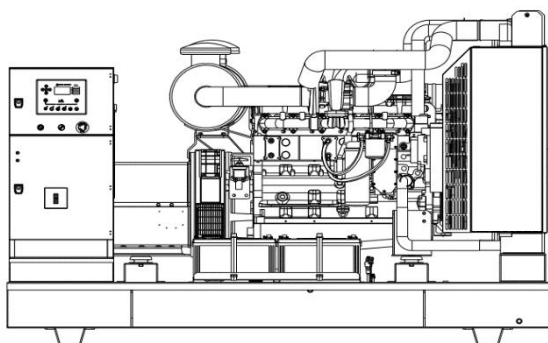


System Rated Power

Model	Voltage (V)	Phase	Frequency (Hz)	Prime Power			Standby Power			Data Center Power		
				kW	kVA	AMPS	kW	kVA	AMPS	kW	kVA	AMPS
C450CS	380	3	50	360	450	684	400	500	760	NA	NA	NA
CE500CS	400	3	50	360	450	650	400	500	722	NA	NA	NA
	415	3	50	360	450	626	400	500	696	NA	NA	NA

Note : $\cos\phi=0.8$; Models with 'E' denote standby rating, without 'E' denote prime rating
For products at other voltage levels, please consult the original manufacturer

ITEMS	OPEN	SILENT
Dimensions (L*W*H) (mm)	3452*1360*2131	5306*1566*2585
Weight (kg)	3300	5000
Control Module Brand	DEIF	DEIF
Single Genset Controller	SGC	SGC
Paralleling Controller(Optional)	AGC	AGC



Product Features

Advantages

- Excellent fuel efficiency
- Robust Power & Superior Performance
- High reliability & easy maintenance
- Exclusive Fuel Injection System
- Advanced Electronic Engine Control System
- High-Efficiency Paper Filter & Long maintenance interval

Standards

- The unit is designed and manufactured in ISO9001, ISO14001 and ISO45001 certified facilities
- The unit complies with ISO 8528 and GB/T 2820 standards
- The alternator complies with NEMA MG1, BS5000, ISO, DIN EN, and IEC standards

Emissions

- Fuel consumption optimized

Performance Guarantee

- Unit undergoes transient response testing in accordance with ISO 8528-5
- Verified product design, quality, and performance
- Engines , alternator and system have all passed prototype and factory testing

A full range of accessories is optional

- Control Panel
- Circuit Breaker/Distribution Panel
- Fuel System
- Oil pipe with shut-off valve mounted on base
- Starting/Charging System
- Exhaust System
- Mechanical and Electrically Driven Radiators

Calsion is a one-stop system supplier

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Technical Specifications

Diesel Engine

Brand	Cummins
Model	QSZ13-G5
Prime Power (kW)	411
Standby Power (kW)	470
Bore ×Stroke (mm)	130×163
Cylinder Number & Arrangement	6L
Displacement (L)	13
Compression Ratio	17:1
Rated Speed (rpm)	1500
Aspiration	Turbocharging
Max Exhaust Back Pressure (kPa)	10
Exhaust Flow Rate (m ³ /h)	2046
Exhaust Temperature (°C)	485
Fuel Cons. at 100% Load (g/kWh)	195
Engine Oil Consumption (g/kWh)	TBD
Speed Control	ECU
Fuel Supply System	Electronic Fuel Injection
Cooling System	Radiator-Cooler with fan
Air Intake Volume (m ³ /h)	23280
Air Exhaust Volume (m ³ /h)	21600
Total Coolant Capacity (L)	73
Total Lubricant Capacity (L)	45.42

Generator Set Parallel Controller

The AGC controller can be used as a single generator set controller. Multiple AGC controllers can also be integrated into a complete power management system based on synchronous, islanded, or grid-connected operation.

The AGC controller offers users multiple options. Through main power station management, up to 32 generator sets can be operated. If more than 32 generator sets are required, expand power station management to group generators and connect up to 32 main grids or 32 groups.

The AGC controller supports serial communication protocols, including Modbus (RS-485, USB, and TCP/IP) and Profibus. This capability enables remote monitoring of generator sets and power plants.

Alternator

Brand	Stamford
Excitation System	Brushless excitation
Voltage Regulation Method	Automatic Voltage Regulation
IP Rating	IP23
Insulation Class	H
Temperature Rise	Class H (LV) / Class F (HV)
Short-Circuit Current Capability	300%(3In):10s
Overspeed Capability	2250rpm

Environmental conditions specified in GB 1105 and ISO 3046 (compliant)

Altitude (m)	≤1000
Ambient temperature (°C)	-25~50
Relative humidity (%)	80

Generator Set Controller

The SGC controller provides protection and control for generator sets, configurable for engine drive, standalone generator set control (off-grid/island mode), and automatic mains failure (AMF) start-up. Featuring AUTO and MANUAL modes, it incorporates extensive control and protection functions suitable for engines and generators, including coolant temperature control, electrical monitoring, and grid voltage/frequency monitoring.



Standard and Optional Configurations

Diesel Engine

- four-stroke
- Standard Single-Stage Air Filter
- Oil drain pipe & shut-off valve
- Emission-optimized engine
- Closed-loop crankcase ventilation
- Electronic Synchronous Speed Control
- Electronic Management System Fuel Injection
- Fuel-optimized engine

Cooling System

- Water pump
- Thermostat
- Radiator for 50°C
- Electrically driven radiator
- Intake air intercooler
- Mechanically driven radiator
- Jacket water heater

- Standard Configuration
- Optional Configuration

Alternator

- NEMA MG1, BS 5000, ISO, DIN EN, and IEC standards
- Self-ventilating structure
- Good voltage waveform
- Steady State, V/Hz Regulator
- Stamford Alternator
- Leroy Somer Alternator
- Engga Alternator
- Up rated Alternator
- Automatic Voltage Regulator
- Voltage fluctuation from no load to full load: ±0.25%
- Brushless alternator, brushless exciter
- 4-pole, rotating magnetic field
- Withstands short-circuit currents up to 300% of rated current for 10 seconds
- Permanent Magnet Exciter
- Other Alternator



Three-phase



50Hz



1500rpm

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Standard and Optional Configurations

Control Panel

- | | |
|--|-------------------------------|
| ■ Island Operation | □ Deep Sea Controller |
| ■ Automatic Mains Failure with ATS | □ ComAp Controller |
| □ Automatic Mains Failure (including breakers control of the genset and mains) | □ Basler Controller |
| □ Islanded operation of multiple units | ■ Deif Controller |
| □ Automatic Mains Failure & Short-term (<10s) Mains Parallel Operation after Restoration | ■ Complete System Measurement |
| □ Single Set Mains Parallel Operation | ■ Digital Measurement |
| □ Multi-set Mains Parallel Operation | ■ Engine Parameters |
| ■ J 1939 Engine ECU Communication | ■ Unit Protection Functions |
| ■ Multiple programmable contact inputs | ■ Engine Protection Function |
| ■ Event Log | ■ Multi-contact output |
| □ Different expansion modules | ■ Multilingual Capability |
| □ RTU-TCP Gateway | □ Remote Signal Transmitter |

Fuel System

- | | |
|------------------------------------|---|
| ■ Oil supply hose on the base | ■ Integrated Fuel Cooler in Radiator |
| □ Fuel filter with water separator | □ Switchable fuel filter with water separator |
| □ Independent fuel cooler | |

- Standard Configuration □ Optional Configuration

Circuit Breaker / Power Distribution

- | | |
|-------------------------------------|---|
| □ 3-pole circuit breaker | □ Manual operation of circuit breakers |
| □ 4-pole circuit breaker | □ Electrically Operated Circuit Breaker |
| □ Integrated Breaker Panel Solution | □ Split-Type Breaker Panel Solution |

Start / Charging System

- | | |
|--|-------------------|
| ■ DC starter | □ Battery rack |
| ■ Maintenance-free batteries and connecting cables | ■ Battery charger |

Exhaust System

- | | |
|--|--|
| ■ Exhaust bellows with connecting flange | □ Exhaust silencer with 35 dB(A) noise attenuation |
| ■ Exhaust silencer with 15 dB(A) noise attenuation | □ Y-piece |
| □ Exhaust silencer with 25 dB(A) noise attenuation | |

Base Frame

- | | |
|-----------------------|--|
| ■ Welded base frame | ■ Flexible mounting of engine and alternator |
| ■ Modular base design | |

Primary power (PRP) :

Suitable for equipment where mains power is unavailable or unreliable. Under variable load conditions, the generator set has unlimited operating hours. It possesses a 10% overload capacity for one hour within a 12-hour period. Power output complies with ISO 8528-1, ISO 3046-1, BS 5514, AS 2789, and DIN 6271. Average load factor: ≤80%.

Standby power (ESP) :

Suitable for applications with stable mains power supply. During mains power outages, standby power can be used to handle variable loads without overload capability. Power compliance meets ISO 8528-1, ISO 3046-1, BS 5514, AS 2789, and DIN 6271 standards. Average load factor: ≤80%. Annual operating time: Maximum 200 hours.

Data Center Power (DCP) :

Suitable for applications with stable mains power supply. The operating time of the generator set is unrestricted under constant or variable load conditions. One hour of 10% overload operation is permitted every 12 hours. Power output complies with ISO 8528-1, ISO 3046-1, BS 5514, AS 2789, and DIN 6271. Average load factor: ≤100%.



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