



## Technical parameters of diesel generator set

|  |                      |
|--|----------------------|
| Model                                  | HC280GF              |
| Rated power                            | 280KW/350kVA         |
| Reserve power                          | 310KW/387.5VA        |
| Rated frequency                        | 50HZ                 |
| Rated speed                            | 1500                 |
| Rated current                          | 504A                 |
| Steady state voltage regulation rate   | $\leq \pm 1\%$       |
| Transient voltage regulation rate      | $+ 20\% \sim - 15\%$ |
| Steady state frequency adjustment rate | $\leq \pm 1\%$       |
| Transient frequency adjustment rate    | $+ 10\% \sim - 7\%$  |
| Waveform distortion rate               | $\leq 5\%$           |
| Voltage fluctuation rate               | $\leq \pm 0.5\%$     |
| Voltage stability time                 | $\leq 1S$            |
| Frequency fluctuation rate             | $\leq \pm 0.5\%$     |
| Frequency stability time               | $\leq 3S$            |
| Overall dimensions                     | 3200*1180*1750mm     |
| Weight                                 | 3050KG               |

Generator set manufacturer: Jiangsu Xinghuachang Power Generation Equipment Co., Ltd

## Parts List

| Number | Name                   | Notes    | Number | Name                         | Notes    |
|--------|------------------------|----------|--------|------------------------------|----------|
| 1      | Engine                 | Standard | 15     | Exhaust chimney              | Standard |
| 2      | Alternator             | Standard | 16     | User Manual                  | Standard |
| 3      | Base                   | Standard | 17     | Certificate of Conformity    | Standard |
| 4      | Battery                | Standard | 18     | Inspection report            | Standard |
| 5      | Tank                   | Standard | 19     | Random tool kit              | Standard |
| 6      | Water tank             | Standard | 20     | Base oil tank                | Optional |
| 7      | Silencer               | Standard | 21     | Water jacket heater          | Optional |
| 8      | Output circuit breaker | Standard | 22     | Fuel heater                  | Optional |
| 9      | Control system         | Standard | 23     | Silent speaker               | Optional |
| 10     | Battery cable          | Standard | 24     | Automatic conversion cabinet | Optional |
| 11     | Oil pipe               | Standard | 25     | Air guide cover              | Optional |
| 12     | Battery rack           | Standard | 26     | Smoke pipe                   | Optional |
| 13     | Float charger          | Standard | 27     | Automatic refueling system   | Optional |
| 14     | Corrugated pipe        | Standard | 28     | Fuel level sensor            | Optional |

**STANDARDS:**

**Description:** Generator and engine are optional.

**Standby Power:** Continues running at variable load for duration of an emergency.  
No overload is permitted on these ratings.

**Prime Power:** Continues running at variable load for unlimited periods with 10% overload available for 1 hour in any 12 hour period.

**Note:** All data sheets are for reference only and subject to change without prior notice.



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## Engine technical parameters

|                            |   |
|----------------------------|---|
| Diesel engine model        | QSNT-G2   |
| Diesel engine manufacturer | Cummins   |
| Rated power                | 321KW/401.25KVA   |
| Reserve power              | 358KW/447.5KVA  |
| Air intake method          | TCI (Turbo Charger with Inter-cooler                              |
| Cooling method             | Direct drive centrifugal fan, closed water circulation cooling    |
| Fuel type/oil type         | Domestic 0 #/SAE 15W-40   |
| Fuel consumption           | 195g/w.h  |
| Form                       | L-type, 6-cylinder, water-cooled, four stroke                     |
| Starting method            | 24V DC starting, equipped with silicon current charging generator |
| Bore*stroke                | 140 * 152   |
| Total oil capacity         | 38.6L   |
| Speed regulation method    | Electronic speed control  |

## Cummins engine characteristics features

- Cummins engines with advanced design, reliable performance, durable operation.
- Alloy-steel and connecting steel-rod, high durability
- High combustion efficiency and low fuel consumption, work continuously
- P/T pump injection technology, low cost, completely combustion





## Technical parameters of generator

|  |  |
|--|--|
| Generator model  | HC280-14                                     |
| Generator power  | 280KW/350KVA                                 |
| Structure  | Single bearing, 4-pole, brushless, anti drip |
| Efficiency   | 0.935  |
| Rated power factor   | 0.8 (lag)                                    |
| Rated voltage  | 400/230V                                     |
| Protection level   | IP23   |
| Voltage regulation method  | AVR (Automatic Voltage Regulator)            |
| Wiring method  | Three phase four wire, Y-type connection     |
| Excitation system  | Brushless self excitation                    |
| Insulation level   | H  |
| Steady state voltage regulation rate   | $\leq \pm 1\%$                               |
| Telephone interference coefficient   | TIF<50                                       |
| Telephone harmonic factor  | $\leq 2\%$                                   |
| Generator manufacturer: Jiangsu Xinghuachang Power Generation Equipment Co., Ltd |  |

## Generator Technical Performance

Generators can be optionally equipped with Stanford/Marathon/Leroy-Somer/Engga/Meccalte

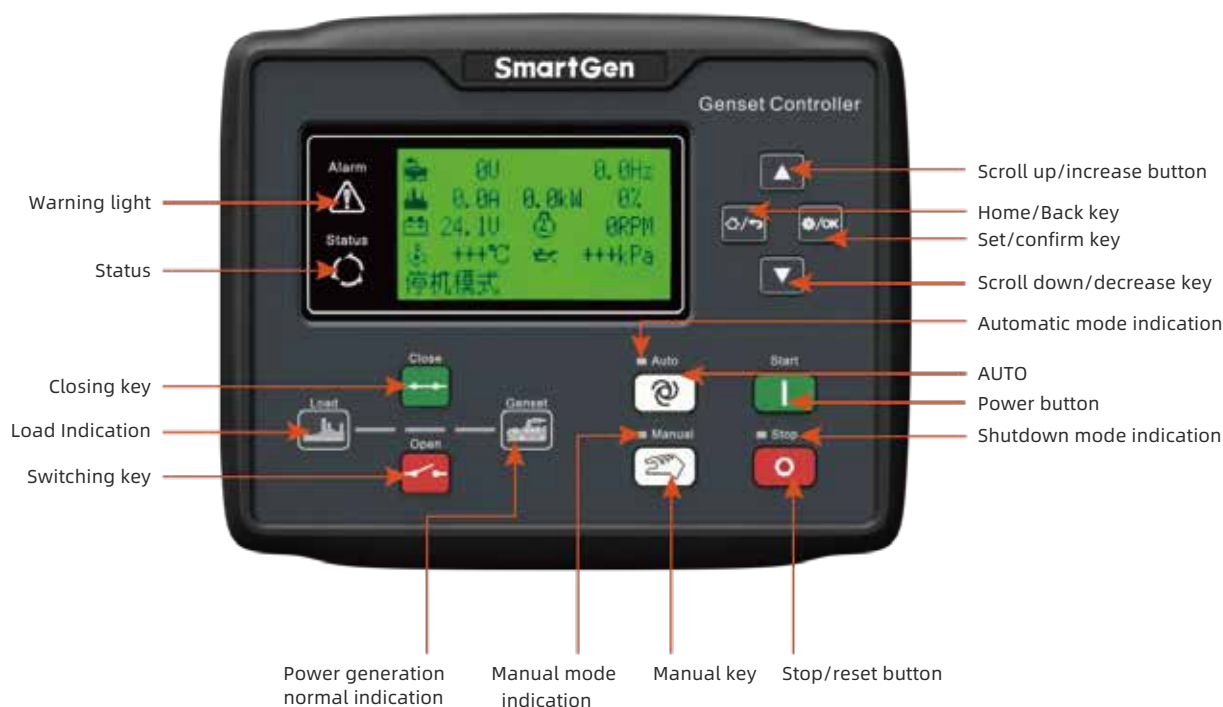
- HC series generators are brushless AC synchronous generators, which comply with relevant national and international standards..
- Self excitation control or optional permanent magnet generator provides continuous short-circuit current capability
- Class H insulation meets harsh environmental requirements
- 2/3 of the winding pitch suppresses excessive neutral current
- 12 stator output terminals can be reconnected
- Single pivot structure.
- Easy to install and maintain
- Standard IP23 protection level
- Unidirectional rotary fan
- Dedicated single pivot SAE2/11.5 or SAE1/14 connection

Options or attachments:

- Winding temperature sensor RTD
- Bearing temperature sensor RTD
- Winding temperature protection thermistor and relay
- Optional permanent magnet generator provides excitation to isolate the control system from the output



## CONTROL SYSTEM



### Control system Performance characteristics

- LCD is 132x64, with backlight, displayed in eight languages (Chinese, English, Spanish, Russian, Portugal, Türkiye, Polish, French), and operated by tapping the button;
- The screen protection adopts hard screen acrylic material, which has good wear resistance and scratch resistance;
- Adopting silicone panels and buttons, with strong adaptability to high and low temperatures in the environment;
- Equipped with RS485 communication interface, using MODBUS protocol can achieve the "three remote" function;
- Equipped with a CAN BUS interface, it can be connected to an electronic fuel injection machine with J1939. It can not only monitor common data of the electronic fuel injection machine (such as water temperature, oil pressure, speed, fuel consumption, etc.), but also control startup, shutdown, high and low speeds through the CANBUS interface (a controller with a CAN BUS interface is required);
- Control and protection functions: achieving automatic start/stop, closing and opening (ATS switching), and complete fault display protection functions for diesel generator sets;
- Equipped with power on shutdown, idle speed control, preheating control, and speed up and down control functions, all of which are relay outputs;
- Parameter setting function: allows users to change and set their parameters, while memorizing them in the internal FLASH memory, which will not be lost in case of system power failure. All parameters of the controller can be adjusted from the front panel of the controller, or through USB interface on a PC, or RS485 interface on a PC;
- Multiple temperature, pressure, and oil level sensors can be directly used, and parameters can be customized.
- Multiple successful starting conditions (speed, oil pressure, frequency) can be selected;
- Equipped with emergency startup function;
- Equipped with automatic recognition function for flywheel tooth number;
- The power supply has a wide range of (8-35) VDC and can adapt to different starting battery voltage environments;
- All parameters are digitally adjusted, abandoning the analog adjustment method of conventional potentiometers, improving the reliability and stability of the entire machine;
- With maintenance function, the maintenance type can be selected as date or running time, and the maintenance action can be set (warning or alarm shutdown);
- It has the function of historical recording, real-time clock, and timed on/off (starting up once a month/week/day and can be set to load or not);
- There is a rubber sealing ring designed between the shell and the control screen, with a protective performance of IP65;
- The controller is fixed with metal clips;
- Modular structure design, flame-retardant ABS shell, pluggable terminal blocks, embedded installation method, compact structure, and convenient installation.