



Specification of generator set



Power Your Imagination

Shandong Superwatt Power Tech Co., Ltd.



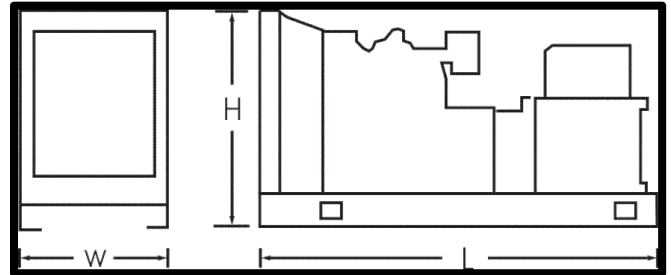
Specification of genset

Model: SC688

Main parameters

- Prime power: 500kW/625kVA.
- Standby power: 550kW/688kVA
- Frequency: 50Hz
- Rated speed: 1500r/min
- Rated Voltage: 400/230V
- Factor: 0.8
- Start mode: DC24V/electrical start

Size and Weight



	Size L×W×H (mm)	Weight (Kg)
● Open type:	3720×1640×2040	4650
● 20' Container:	6058×2438×2591	8150

Operation conditions

- Operation temp: $\leq 40^{\circ}\text{C}$
- altitude: ≤ 1000 米
- Humidity: $\leq 60\%$

Note:

1. When the ambient temperature is higher than 40°C or the altitude is higher than 1000 meters, the power decreases, which needs to be corrected.
2. Excessive humidity requires corresponding measures.

Remark

- Prime Power (PRP) : Refers to the unit can run continuously for 24 hours under variable load, allowing 10% overload every 12 hours for 1 hour.
- Standby power (ESP) : at an average load rate of 80%, for no more than 500 hours a year. No overload is allowed.
- Each unit has passed the load test of 0%, 25%, 50%, 75%, 100%, 110% and static, transient response capacity, all protection devices and control systems have passed strict inspection before the factory qualified

2

Specification of engine

Model: KTA19-G8A

Engine parameters

- Manufacturer: CUMMINS(CCEC)
- Aspiration: Turbocharged and Aftercooled
- Cooling: Water-cooling
- No. of cylinder/arrangement: 6/in-line
- Displacement: 19L
- Bore: 159mm
- Stroke: 159mm
- Compression Ratio: 13:1
- Rated speed: 1500r/min
- Prime/standby power:550/610kW
- Dry weight: 1853kg
- Governor: Electronic

Lubrication system

- capacity: 50.0L
- pressure @idle speed: 138kPa
- pressure @rated speed: 345-483kPa

Electrical System

- Battery recharge: 24V

Fuel Consumption

Maximum Allowable Injector Return Line Restriction

- With Check Valves:22kPa
- Less Check Valves:8.5kPa

Exhaust system

- Max allowable back pressure: 10kPa

Air Induction system

Maximum Allowable Intake Air Restriction:

- With dirty Filter Element: 6.23kPa
- With Clean Filter Element: 3.73kPa

Cooling system

- Standard Thermostat range: 82-95°C
- Minimum Pressure Cap: 103kPa

3

Specification of alternator

Alternator parameters

- Rated voltage: 400/230V
- Rated frequency: 50Hz
- Power factor: 0.8
- Rated power: 500kW/625kVA
- Insulation class: H
- Temp. Rise class: H
- Protection: IP23
- Ambient temperature: 40°C
- Altitude: ≤1000m
- Overspeed: ≤2250rpm

Features

- Phases: 3
- Winding pitch: 2/3
- No. of Bearing: 1
- Connection type: Star
- Poles: 4
- Waveform Distors. (THD): <5%
- Telephone Interference (THF): <2%

4

SWT control system—standard for single unit



Features

- LCD Screen, keys operation
- Multilingual display
- control and protection functions
- Engine and alternator parameter detection
- Local and remote start
- Reasonable keys layout, friendly interface
- Multiple communication interfaces available
- Event logs
- IP65 Overall

Note: the picture is for reference only. The specific model is subject to the formal quotation

Please refer to "SWT parallel system" if synchronising units are required.

Control box (Templet)



Features

- User ID display function
- Parameters can be fully configured through PC software
- LED and LCD alarm lamps
- Magnetic sensor speed detection
- Work mode selectors (switchable)
- Preset auto start/stop cycle
- Fuel quantity detection, low oil level alarm
- Voltage measurement
- Current measurement
- Generator /mains circuit breaker control
- Plug terminal type wiring design
- Power saving mode
- Switch between generator /mains load
- Upgradeable Firmware

Operation brief

- It is controlled by start, stop, auto and manual buttons on the panel
- The user can set the data of the module through the panel button, or the setting data can be uploaded through the configuration operation software via USB interface

Advantage

- The real-time clock provides accurate event logging
- Provide free PC software license
- Advanced PCB layout ensures high quality of modules
- Modular design, excellent stability
- Various communication interfaces available

5

ATS (Auto transfer system) optional



Function

Particular ATS controller, which combines measurement, display, control for the automatic control on mains/mains or mains/ generator system.

Note: communication function requires extra communication module. The picture is for reference only. The specific model is subject to the quotation

Features

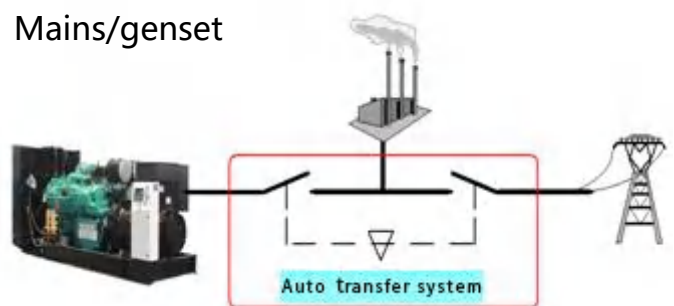
- Microcomputer control, all digital technology
- Display the operating state of ATS and the operation mode of controller directly through the LCD screen
- Operating parameters can be input via the LCD screen and the keys of controller
- Measuring data (including voltage/frequency) through LCD screen
- PC-level switch and electromagnetic driven structure can realize fast on-load switching of two power sources (switching time $\leq 80\text{ms}$)
- Electrical and mechanical double interlock mechanism, the main loop contact for the two static structure, the moving contact using a "V" design, from the design to ensure that the two power supply will not be shortcircuit.
- Coil control power supply can be provided by the main and standby AC or DC power supply, without additional control power supply

Case

Mains/mains



Mains/genset



6 SWT paralleling system (Optional)

Function

SWT paralleling system is specially designed for gensets & grid system paralleling (set to set or set to grid), up to 32 units synchronise automatically, realize the automatic starting unit automatic parallel operation, and according to the load size the number of units in operation or exit the operation. When mains return to normal, the unit will automatically discharge and cooling down, the system can start paralleling mains grid, automatic transfer and PLC control load can also be customized upon customer requirements, the control of multiple load and multiplex mains SWT paralleling system can also be used with ATS.

Features

- SWT paralleling system comprises international famous brand controller. PLC system, touch screen etc are available upon customer requests
- Integrated with advanced control technology, perfect function, safe, durability and reliability.
- Smart and flexible, one machine one screen, the unit can be used independently or parallelly
- Easy to operate, fully automatic, Chinese and English operating system, built-in fault detection
- The system can automatically input the appropriate number of units according to the load size to avoid the operation of high-power units with small load and realize the off-peak control
- Easy to expand capacity, just install the required power units, convenient to add units for the expansion in the future.

Case

Genset to Genset



Gensets to grid



Paralleling with ATS





Accessories list



Standard accessories



- | | |
|----------------------------------|--------------------------|
| ■ Engine | ■ Test report |
| ■ Alternator | ■ Certificate of quality |
| ■ Chassis | ■ Schematic diagram |
| ■ Control box | ■ Installation manual |
| ■ Controller for single unit | ■ Operation manual |
| ■ Circuit breaker (up to 1200kW) | |
| ■ Industrial muffler | |
| ■ Flange of muffler | |
| ■ Bellow joint | |
| ■ Shock absorber | |
| ■ Base tank (up to 200kW) | |



Optional accessories



- | | | |
|--|--|----------------------------------|
| <input type="checkbox"/> Daily fuel tank/bulk fuel tank | <input type="checkbox"/> Exhaust pipe | ComAp controller |
| <input type="checkbox"/> Residential silencer | <input type="checkbox"/> Hot air discharge duct | <input type="checkbox"/> MRS16 |
| <input type="checkbox"/> Power cable | <input type="checkbox"/> RS485 extension module | <input type="checkbox"/> AMF25 |
| <input type="checkbox"/> Anti condensation heater (alternator) | <input type="checkbox"/> Ethernet communication | <input type="checkbox"/> IG200 |
| <input type="checkbox"/> battery charger | <input type="checkbox"/> Cloud monitor | <input type="checkbox"/> IG-NTC |
| <input type="checkbox"/> Water jacket heater | <input type="checkbox"/> ATS panel | <input type="checkbox"/> IM-NT |
| <input type="checkbox"/> Oil heater | <input type="checkbox"/> Motorized circuit breaker | Smartgen controller |
| <input type="checkbox"/> Fuel level sensor | <input type="checkbox"/> Synchronizing system | <input type="checkbox"/> HGM4010 |
| <input type="checkbox"/> Auto oil make-up device | <input type="checkbox"/> Spare parts | <input type="checkbox"/> HGM4020 |
| <input type="checkbox"/> Auto fuel filling device | Deepsea controller | <input type="checkbox"/> HGM6110 |
| <input type="checkbox"/> Soundproof enclosure | <input type="checkbox"/> DSE6020 | <input type="checkbox"/> HGM6120 |
| <input type="checkbox"/> Containerized enclosure | <input type="checkbox"/> DSE7320 | <input type="checkbox"/> HGM9510 |
| <input type="checkbox"/> Trailer | <input type="checkbox"/> DSE8610 | <input type="checkbox"/> HGM9520 |
| | <input type="checkbox"/> DSE8620 | |
| | <input type="checkbox"/> DSE8660 | |