
Silent Type/ Silent Mobile Trailer Type Diesel Generator Set with Cummins Engine



1.Prime Power 112.5kVA Diesel Generator Set Specifications

Diesel Generator Data

Manufacturer:	Guangxi Dingbo Power Equipment Manufacturing Co.,Ltd
Genset model	DB-90GF
Type	Silent type
Prime Power:	112.5KVA/90KW
Standby Power:	125KVA/100KW
Rated current:	148A
Rated voltage:	440V
Rated speed	1800rpm
Rated frequency	60Hz
Power factor:	0.8lag
Phase:	3 phase 4 wire
Stable voltage regulation rate	≤±1%
Transient voltage regulation rate	≤+20~-15%
Voltage recovery time	≤15s
Voltage Volatility	≤±1%
Frequency adjustment rate	≤±1%
Transient adjustment rate	≤±10~-7%
Frequency stabilization time	≤5s
Frequency Volatility	≤1%
Noise level	75dBA at 7 meters
Dimension (L x W x H):	3000x1240x1790mm
Gross weight:	2000kg
Includes: muffler, silent canopy, base bottom fuel tank, 24V DC maintenance free battery, battery cable, battery charger, mains circuit breaker, shock absorber pad, factory test report, random data set, etc.	

Main Technical Data of Diesel Engine:

Manufacturer:	Dongfeng Cummins Engine Co.,Ltd
Engine model	6BT5.9-G2
Prime power:	100KW
Standby power:	110KW
Frequency:	60Hz
Speed:	1800rpm
Cylinders no. & Type:	6 cylinders, Inline, 4 stroke, diesel engine, water-cooled
Aspiration:	Turbocharger
Displacement:	5.9L
Governor	Electronic speed governor
Bore x Stroke(mm):	102x 120
Start mode:	Electric start
Starter motor voltage:	24V DC
Battery charging system:	40A
Type Injection System:	Direct injection
Fuel consumption at Prime power	100%:28.5L/h 75%:20.7L/h 50%:14.4L/h 25%:9L/h
Minimum Required Lube System Capacity - Sump plus Filters	16.4L
Engine Coolant Capacity	7.9L
Standard Thermostat	82 - 95 °C

Main Technical Data of Alternator:

Manufacturer	Shanghai Stamford Power Equipment Co.,Ltd
Alternator model	Shanghai Stamford GR225H
Prime power	90KW(112.5kVA)
Rated Voltage:	440V
Frequency	60Hz
Speed:	1800rpm
Wire connecting method	Y type, 3 phase 4 wire
Power Factor:	0.8lag
Efficiency:	95%
Regulator:	AVR

Rotor:	Single/double bearing
Exciter type:	Brushless self excitation
Recovery time(Tr)	1s
Waveform : TIF	<50
Waveform : THF	<2%
Voltage Regulation, Steady State:	±0.5%
Protection:	IP23
Insulation class	H
Temperature rise grade:	H
Alternator Efficiency:	95%
Type:	Synchronous alternator
Rated power factor	0.8lag
Overload	110% rated load for 2 hour per 24 hour

SmartGen Control System

Model: HGM6110

Origin: China

Automatic controller



Operating Environment:

Operating temperature:	-25°C ~70°C
Relative humidity:	95%
Operating voltage:	DC24V(range: 8-35V)

Product Features:

HGM6110 series automatic controller, integrating digital, intelligent and network techniques, is used for automatic control and monitoring system of genset. It can carry out functions of automatic start/stop, data measurement, alarm protection and three “remote” (remote control, remote measure and remote communication). The controller uses LCD display, optional display interface including Chinese, English, Spanish, Russian, Portuguese, Turkey, Polish and French with easy and reliable operation.

Below shut down causes are included:

- Low Coolant Level
- High coolant temperature
- Low oil pressure
- Low output frequency

High output frequency
Low output voltage
High output voltage
Low Fuel Level
Emergency stop

Main characteristics are as following:

132x64 LCD display with backlight, optional language interface (Chinese, English, Spanish, Russian, Portuguese, Turkey, Polish and French), push-button operation;
Acrylic screen, improved wearable and scratch resistance property;
Silica-gel panel and keys can well adapt to higher and lower temperature;
RS485 communication port enables “three remote” functions via MODBUS protocol;
CANBUS port which can be connected to ECU with J1939, it not only can monitor frequently-used data (such as water temperature, oil pressure, speed and fuel consumption, etc.) but also can control start, stop, high speed and low speed (controller with CANBUS port is needed) via CANBUS port;
Adapt to 3P4W, 3P3W, 1P2W and 2P3W (120V/240V), 50Hz/60Hz system;
Can measure and display 3 phase voltage, 3 phase current, frequency, power parameter of mains/gens;

Mains

Generator

Line voltage (Uab, Ubc, and Uca)

Line voltage (Uab, Ubc, and Uca)

Phase voltage (Ua, Ub, and Uc)

Phase voltage (Ua, Ub, and Uc)

Frequency Hz

Frequency Hz

Phase sequence

Phase sequence

Load

Current IA, IB, IC

Each and total active power kW

Reactive power kvar

Apparent power kVA

Power factor PF

Generator accumulated energy kWh

Output percentage with load %

For mains, genset has functions of over/under voltage and loss of phase; For gens, genset has functions of over/under voltage, over/under frequency, over current and over power;

Precision measure and display of parameters about engine;

Temp. (WT) °C/°F

Oil pressure (OP) kPa/psi/bar

Fuel level (FL) % Fuel remains L

Speed (SPD) r/min

Battery Voltage (VB) V

Charger Voltage (VD) V

Accumulated running hours

Accumulated start times

Control and protection function: Automatic start/stop of genset, load transfer (ATS control) and perfect fault display and protection;

With ETS, idle control, pre-heat control, speed raise/drop control, all of them are relay outputs;

Parameter setting: Allow user to modify setting and store them in internal FLASH memory. The parameters cannot be lost even when power off. All of parameters can be set not only from the front panel, but also adjusted through USB interface (or RS485 interface) via PC;

Multiple sensors of temperature, pressure and fuel level can be used directly, parameters can be defined by user;

Multiple conditions of crank disconnect (speed, oil pressure, frequency) can be selected;

With emergency start function;

With flywheel teeth numbers automatic identification function;

Power supply range: (8~35)VDC, accommodating to different starting battery voltage environment;

All parameters use digital modulation, instead of analog modulation using conventional potentiometer, having improved reliability and stability;

With maintenance function. Types (date or running time) can be selected and actions (warning or alarm shutdown) can be set when maintenance time out;

Event log, real-time clock, scheduled start & stop function (can be set as start unit once a day/week/month whether with load or not);

Add rubber gasket between shell and controller screen, the waterproof can reach IP65;

Controller is fixed by metal fixing clips;

Modular design, flame-retardant ABS shell, pluggable terminal, embedded mounting, compact structure and easy installation.

2.Prime Power 175kVA Diesel Generator Set Specifications

Diesel Generator Data

Manufacturer:	Guangxi Dingbo Power Equipment Manufacturing Co.,Ltd
Genset model	DB-140GF
Type	Silent type/Silent mobile trailer type
Prime Power:	175KVA/140KW
Standby Power:	187.5KVA/150KW
Rated current:	230A
Rated voltage:	440V
Rated speed	1800rpm
Rated frequency	60Hz
Power factor:	0.8lag
Phase:	3 phase 4 wire
Stable voltage regulation rate	≤±1%
Transient voltage regulation rate	≤+20~-15%
Voltage recovery time	≤15s
Voltage Volatility	≤±1%
Frequency adjustment rate	≤±1%
Transient adjustment rate	≤±10~-7%
Frequency stabilization time	≤5s
Frequency Volatility	≤1%
Noise level	75dBA at 7 meters
Dimension (L x W x H):	Silent type:3300x1700x1850mm Silent mobile trailer type:3300×1700×2850mm
Gross weight:	Silent type:2200kg Silent mobile trailer type:3100kg
Includes: muffler, silent canopy, base bottom fuel tank, 24V DC maintenance free battery, battery cable, battery charger, mains circuit breaker, shock absorber pad, factory test report, random data set, etc.	

Main Technical Data of Diesel Engine:

Manufacturer:	Dongfeng Cummins Engine Co.,Ltd
Engine model	6CTA8.3-G2
Prime power:	170KW
Standby power:	187KW
Frequency:	60Hz
Speed:	1800rpm
Cylinders no. & Type:	6 cylinders, Inline, 4 stroke, diesel engine, water-cooled
Aspiration:	After-cooled, turbo-charged
Displacement:	8.3L
Governor	Electronic speed governor
Bore x Stroke(mm):	114x 135
Start mode:	Electric start
Starter motor voltage:	24V DC
Battery charging system:	40A
Type Injection System:	Direct injection
Fuel consumption at Prime power	100%:40L/h 75%:30L/h 50%:20L/h 25%:11L/h
Oil pan capacity (Max - Min)	18.9-15.1L
Lubrication system Min. capacity (oil pan + oil filter)	23.8L
Coolant capacity-engine only	12.3L
Standard Thermostat	83 - 95 °C

Main Technical Data of Alternator:

Manufacturer	Shanghai Stamford Power Equipment Co.,Ltd
Alternator model	Shanghai Stamford GR270EX
Prime power	140KW(175kVA)
Rated Voltage:	440V
Frequency	60Hz
Speed:	1800rpm
Wire connecting method	Y type, 3 phase 4 wire
Power Factor:	0.8lag
Efficiency:	95%

Regulator:	AVR
Rotor:	Single/double bearing
Exciter type:	Brushless self excitation
Recovery time(Tr)	1s
Waveform : TIF	<50
Waveform : THF	<2%
Voltage Regulation, Steady State:	±0.5%
Protection:	IP23
Insulation class	H
Temperature rise grade:	H
Alternator Efficiency:	95%
Type:	Synchronous alternator
Rated power factor	0.8lag
Overload	110% rated load for 2 hour per 24 hour

SmartGen Control System

Model: HGM6110

Origin: China

Automatic controller



Operating Environment:

Operating temperature:	-25°C ~70°C
Relative humidity:	95%
Operating voltage:	DC24V(range: 8-35V)

Product Features:

HGM6110 series automatic controller, integrating digital, intelligent and network techniques, is used for automatic control and monitoring system of genset. It can carry out functions of automatic start/stop, data measurement, alarm protection and three “remote” (remote control, remote measure and remote communication). The controller uses LCD display, optional display interface including Chinese, English, Spanish, Russian, Portuguese, Turkey, Polish and French with easy and reliable operation.

Below shut down causes are included:

Low Coolant Level

High coolant temperature

Low oil pressure

Low output frequency
High output frequency
Low output voltage
High output voltage
Low Fuel Level
Emergency stop

Main characteristics are as following:

132x64 LCD display with backlight, optional language interface (Chinese, English, Spanish, Russian, Portuguese, Turkey, Polish and French), push-button operation;
Acrylic screen, improved wearable and scratch resistance property;
Silica-gel panel and keys can well adapt to higher and lower temperature;
RS485 communication port enables “three remote” functions via MODBUS protocol;
CANBUS port which can be connected to ECU with J1939, it not only can monitor frequently-used data (such as water temperature, oil pressure, speed and fuel consumption, etc.) but also can control start, stop, high speed and low speed (controller with CANBUS port is needed) via CANBUS port;
Adapt to 3P4W, 3P3W, 1P2W and 2P3W (120V/240V), 50Hz/60Hz system;
Can measure and display 3 phase voltage, 3 phase current, frequency, power parameter of mains/gens;

Mains

Line voltage (Uab, Ubc, and Uca)
Phase voltage (Ua, Ub, and Uc)
Frequency Hz
Phase sequence

Generator

Line voltage (Uab, Ubc, and Uca)
Phase voltage (Ua, Ub, and Uc)
Frequency Hz
Phase sequence

Load

Current IA, IB, IC
Each and total active power kW
Reactive power kvar
Apparent power kVA
Power factor PF
Generator accumulated energy kWh
Output percentage with load %

For mains, genset has functions of over/under voltage and loss of phase; For gens, genset has functions

of over/under voltage, over/under frequency, over current and over power;

Precision measure and display of parameters about engine;

Temp. (WT)	°C/°F		
Oil pressure (OP)	kPa/psi/bar		
Fuel level (FL)	%	Fuel remains	L
Speed (SPD)	r/min		
Battery Voltage (VB)	V		
Charger Voltage (VD)	V		

Accumulated running hours

Accumulated start times

Control and protection function: Automatic start/stop of genset, load transfer (ATS control) and perfect fault display and protection;

With ETS, idle control, pre-heat control, speed raise/drop control, all of them are relay outputs;

Parameter setting: Allow user to modify setting and store them in internal FLASH memory. The parameters cannot be lost even when power off. All of parameters can be set not only from the front panel, but also adjusted through USB interface (or RS485 interface) via PC;

Multiple sensors of temperature, pressure and fuel level can be used directly, parameters can be defined by user;

Multiple conditions of crank disconnect (speed, oil pressure, frequency) can be selected;

With emergency start function;

With flywheel teeth numbers automatic identification function;

Power supply range: (8~35)VDC, accommodating to different starting battery voltage environment;

All parameters use digital modulation, instead of analog modulation using conventional potentiometer, having improved reliability and stability;

With maintenance function. Types (date or running time) can be selected and actions (warning or alarm shutdown) can be set when maintenance time out;

Event log, real-time clock, scheduled start & stop function (can be set as start unit once a day/week/month whether with load or not);

Add rubber gasket between shell and controller screen, the waterproof can reach IP65;

Controller is fixed by metal fixing clips;

Modular design, flame-retardant ABS shell, pluggable terminal, embedded mounting, compact structure and easy installation.