



TC165Z 50Hz POWERED BY CUMMINS SERIES



TECHNICAL SPECIFICATIONS

DIESEL GENERATING SET 400/230V-50Hz-3Phase

Model	TC165Z	
Power(ESP)	kVA/kw	161/129
Power(PRP)	kVA/kw	150/120
Rated Voltage	V	400
Rated Current	A	232
Rated rotation speed	r/min	1500
Power Factor		0.8
Fuel Consumption	Litre/hour	34
Fuel Tank Capacity	Litre	Open Type : 262 / Silent Type: 370
Noise level	dB(A)@7m	Silent Type:

WEIGHT AND DIMENSIONS

GEN-Set	Dimension (L*W*H)	Weight
Open Type		
Silent Type		

STANDARDS:

Genset: GB/T2820—2009,ISO8528

Alternator: SINOCOX , SMF270ES

Diesel Engine: CUMMINS , 6BTAA5.9-G12

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.

CONFIGURATION:

Standard: Engine, alternator, cooling system, Base frame (excluding fuel tank), shock absorber, air inlet system, control box (including mains floating charge), plastic fan blades (when the engine and water tank do not bring).

Optional: Base frame (including fuel tank), water jacket heater, fuel water separator, fuel heater, fuel level sensor (only supporting underframe tank), switch box (with switch), power switch, the water level sensor, motor anti condensation heater, automatic fueling system (only supporting base frame including fuel tank), battery frame.

Accessories: Silencer, bellow, exhaust silencing system accessories (with the matching engine), regular battery, starting cord assembly, data of gen-set, random tool (with the matching engine).





ENGINE Specification

Manufacturer: CUMMINS

Model	6BTAA5.9-G12
Engine speed Rated	1500 RPM
Cylinder /Arrangement	6 / L
Displacement	5.9 L
Bore and Stroke	102 mm×120 mm
Compression ratio	17.3 : 1
Max. stand by power at rated RPM	155KW
Frequency regulation , steady state	≤1%
Governor : type	Electrical
Aspiration and Cooling	Turbocharged & After-cooled

Exhaust System

Exhaust gas flow	357 L/s
Exhaust temperature	507℃
Max back pressure	10kPa

Fuel System

Fuel consumption100% (of the Prime Power)	34L / h
Fuel consumption75% (of the Prime Power)	26L / h
Fuel consumption50% (of the Prime Power)	17L / h
Fuel consumption110% (of the Prime Power)	38L / h

Oil system

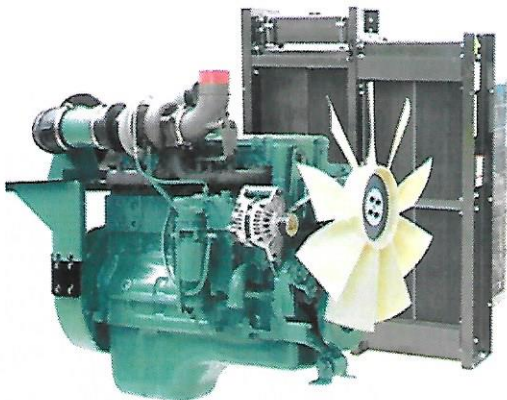
Total oil capacity w/filters	16.4 L
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Air intake

Engine air flow	150L/s
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Coolant System

Radiator & engine capacity	10 L
Max water temperature	104℃
Thermostat	82-95℃



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

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





ALTERNATOR Specification

Manufacturer: SINOCOX

Type	SMF270ES
Number of phase power	3
Factor (Cos Phi)	0.8
Pole	4
Bearing	1
Coupling	Direct
Exciter type	SHUNT
Insulation : class , temperature rise	H / H
Degree of protection	IP23
Altitude	≤1000m
Winding Pitch	2/3
Winding Leads	12

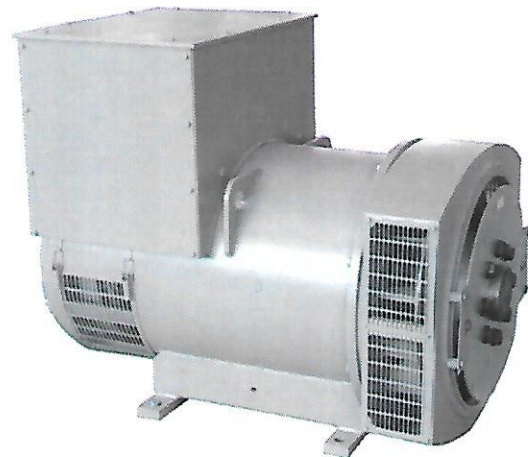
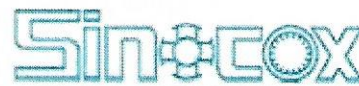
FEATURES

- Class H insulation system
- selectable winding, To meet the demand of the bad environment
- 12 Lead Reconnect, able for different voltage, meet the demand of different countries and regions
- 2/3 pitch windings restrain the content of harmonious
- Different Excitation Systems for different load demand
- Ip23 standard protection, IP44 for option
- Provide single bearing or double bearing

STANDARDS

-IEC60034, NEMA MG1-32, ISO8528, CSA
C22.2-100, VDE 0530, GB755

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Control Panel

Model: easYgen-1600

SYNCHRONISING AUTO START LOAD SHARE MODULE

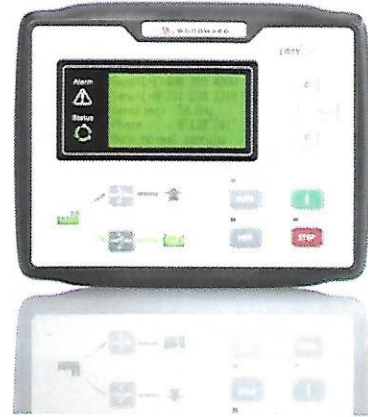
DIMENSIONS

OVERALL

209mm x 166mm x 45mm

PANEL CUTOUT

186mm x 141mm



KEY FEATURES

- With ARM-based 32-bit SCM, highly integrated hardware, high reliability level
- Multilingual interface (English, Chinese, Spanish, Russian, Portuguese, Turkish, Polish, and French) making commissioning
- Improved LCD wear-resistance and scratch resistance due to hard screen acrylic
- Silicon panel and pushbuttons for better operation in high-temperature environment
- RS485 communication port enabling remote control, remote measuring, remote communication via ModBus protocol
- Suitable for 3-phase 4-wire, 3-phase 3-wire, single phase 2-wire, and 2-phase 3-wire systems with voltage 120/240 V and frequency 50/60 Hz
- easYgen-1600 only: Collects and shows 3-phase voltage, current, power parameter, and frequency of generator and additionally 3-phase mains voltage. Mains Generator Line voltage (UAB, UBC, and UCA)

- Line voltage (UAB, UBC, and UCA) Phase
- Phase sequence, frequency, Load current IA, IB, IC
- easYgen-1600 only: For Mains, controller has over and under voltage, over and under frequency, loss of phase and phase sequence wrong detection functions
- 3 fixed analog sensors: Engine temperature, oil pressure, and fuel level
- Protection: automatic start/stop of the genset
- Tier 4 CAN engine support
- easYgen-1600 only: ATS (Auto Transfer Switch) control with perfect failure indication and protection function
- All output ports are relay-out
- Logon wallpaper and display time are user-defined
- With maintenance function. Actions (warning or shutdown) can be set when maintenance time out
- Waterproof security level IP55 due to rubber seal installed between the controller enclosure and front panel

Users can reset total run time and total electric energy for convenience.

- Users can define HMI status screens (content) via drag-and-drop

KEY FUNCTIONS

- Protection: automatic start/stop of the genset, ATS (Auto Transfer Switch) control with failure indication and protection function
- All output ports are relay-out
- Curves of temperature, oil pressure, fuel level can be used directly and users can define the sensor curves by themselves
- Multiple crank disconnect conditions (generator frequency, speed sensor, oil pressure) are optional
- Event log, real-time clock, scheduled start & stop generator (can be set as start genset once a day/week/month whether with load or not)
- Logon wallpaper and display time are user-defined
- Maintenance function: Actions (warning or shutdown) can be set when maintenance time out