

WT-SC165 150KVA Technical Data sheet



Gensets model	Prime Power (50hz)	Standby Power (50hz)	Engine Model
MSC165	150KVA/120KW	165KVA/132KW	SC8D220D2

General Features:

ΔSDEC diesel engine made by SDEC China, with radiator at ambient temperature 40°C, fans are driven by belt, with safety guard

ΔWintpower Alternator with single bearing alternator; IP Protection, Insulation class H

ΔAir Filter, Oil filter and fuel filter fitted

ΔLube-oil drain valve fitted

ΔElectric Starter Charge motor 24 VD.C

Δ Battery Charger

ΔOptional soundproof and weatherproof canopy

Δ3 pole MCCB Delixi breaker/Optional ABB

ΔOperation & Maintenance manual

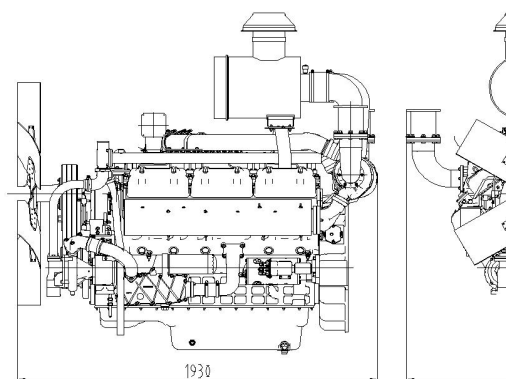
ΔAccessory: A suit of ripple flex exhaust pipe; exhaust siphon, muffler; and a set of spare parts & Tools

Δ The structure is built-up, the built-in residential muffler makes the noise lower.

ΔExhaust guide plate and air channel for air intake&noise reduction are mounted within soundproof canopies.

ΔOutside Emergency Stop Button.

Δ 8 Hours Base Fuel tank is equipped, With lifting ear and forklift slots. Outside fuel inlet/return, outside lub oil and coolant drain.



Voltage Regulation:

Voltage regulation maintained within $\pm 0.5\%$

Between 0.8 and 1.0 lagging and unity

From no load to full load

At speed droop variation upto 4.5%

Frequency Adjustable Ratio:

Change load from 0-100%, within 1.0% (electric speed regulator), within 4.5% (mechanical speed regulator)

Frequency Undulation:

load from 0-100%, frequency undulation within 0.25%

No load wire volts max undulation ration\ within 1.8%

Three Phrase balanced load in the order of 5%

Note:

1)The engine performance is as per GB/T2820/Ratings are based on GB/T1147.1.

2) Prime Power (PRP): Prime power is available for continuous 12-hours running, in accordance with 10% overload capability is available for a period of 1 hour within a 12-hours period of operation. Standby (ESP): The standby power rating is applicable for supplying emergency power. No overload, soundproof under rating power.

3) Standby power is available in the event of a utility power outage or under test conditions for up to 2 per year. The permissible average power output over 24 hours of operation shall not exceed 80% of the rating.

Sales Promise:

(1) All the gensets are tested on load before they leave factory, various kinds of functions are tested and provided.

(2) Warranty for all of our gensets and accessories is according to our standard conditions since test 1500 running hours accumulatively, subject to the earlier, kindly refer to our service terms.

Engine Technical Data Sheet

◎ SPECIFICATIONS		◎ FUEL CONSUMPTION	
○ Engine Model	SC8D220D2	○ Power	100%
○ Engine Type	In-line, 4 strokes, water-cooled 4 valves, Turbo charged air-to-air intercooled	25%	
○ Combustion type	Direct injection	50%	
○ Cylinder Type	Dry liner	75%	
○ Number of cylinders	6	100%	
○ Bore × stroke	114(4.49) × 135(5.32) mm(in.)	110%	
○ Displacement	8.27(504.6) lit.(in3)		◎ FUEL SYSTEM
○ Compression ratio	16:01	○ Injection pump	Longkou in
○ Firing order	1-5-3-6-2-4	○ Governor	Elect
○ Injection timing	6° BTDC	○ Feed pump	Mecha
○ Dry weight	Approx. 740kg (1631lb)	○ Injection nozzle	Multi
○ Dimension (L×W×H)	1455×762×1273 mm (57.3×30.0×50.2 in.)	○ Opening pressure	250 kg/cm ²
○ Rotation	Counter clockwise viewed from Flywheel	○ Fuel filter	Full flow, 4
○ Fly wheel housing	SAE NO.3	○ Used fuel	Diese
○ Fly wheel	SAE NO.2		
◎ MECHANISM		◎ LUBRICATION SYSTEM	
○ Type	Over head valve	○ Lub. Method	Fully forced p
○ Number of valve	Intake 2, exhaust 2 per cylinder	○ Oil pump	Gear type driv
○ Valve lashes at cold	Intake 0.25mm (0.0099 in.)	○ Oil filter	Full flow, 4
○ Valve lashes at cold	Exhaust 0.50mm (0.0197 in.)	○ Oil pan capacity	High level 17.4
	◎ VALVE TIMING	○ Oil pan capacity	Low level 15

	Opening	Close	◦ Angularity limit	Front dc
◦ Intake valve	22.5 deg. BTDC	34.5 deg. ABDC	◦ Angularity limit	Front t
◦ Exhaust valve	67.5 deg. BBDC	25.5 deg. ATDC	◦ Angularity limit	Side to s
			◦ Lub. Oil	Refer to Op

◎ COOLING SYSTEM

◎ ENGINEERING

◦ Cooling method	Fresh water forced circulation	◦ Water flow	200 liters/m
◦ Water capacity (engine only)	12 liters (3.17 gal.)	◦ Heat rejection to coolant	20.35 kcal/s
◦ Pressure system	Max. 0.5 kg/cm2 (7.11 psi)	◦ Air flow	16.4 m3/mi
◦ Water pump	Centrifugal type driven by belt	◦ Exhaust gas flow	35.9 m3/mi
◦ Water pump Capacity	200 liters (52.8 gal.)/min	◦ Exhaust gas temp. restrictions	600 °C (
◦ Thermostat	Wax–pellet type	◦ Intake system	3 kP
◦ Thermostat	Opening temp. 82°C	◦ Intake system	6 kP
◦ Thermostat	Full open temp. 93°C	◦ Exhaust system	6 kP
◦ Cooling fan	Blower type, plastic 762 mm diameter, 10 blades	◦ Max. permissible altitude	2,4
◦ Cooling fan	Blower type, plastic 660 mm diameter, 10 blades	◦ Exhaust system	6 kP
◦ Cooling air flow	5.57 m³/s	◦ Max.	2,4

◎ ELECTRICAL SYSTEM

◎ CONVERSION

◦ Charging generator	28V×55A	in. = mm × 0.0394	lb/f
◦ Voltage regulator	Built-in type IC regulator	PS = kW × 1.3596	U.S.
◦ Starting motor	24V×7.5kW	psi = kg/cm2 × 14.2233	kW
◦ Battery Voltage	24V	in3 = lit. × 61.02	lb/PS.h
◦ Battery Capacity	180 AH	in. = mm × 0.0394	lb/f
		hp = PS × 0.98635	cfm =
		lb = kg × 2.20462	

Alternator Technical data

Wintpower WT274F

Δ Brushless, self exciting	Exciter
Δ class "H" insulation	Cooling Fan
Δ Standard degree of protection is IP23	Bearing
Δ self regulating	Windings
Δ With fan cooling	Connection Type
Δ Resist Humid grease	Insulation Type
Δ AC excitation, roating rectification tube	Pitch
Δ Stator grease insulation covered	Amortisseur Winding
Δ Rotator and exciation high polymer, Resist the corruption of	Voltage Regulator

oil and acid

Voltage Regulator NL-FL

Δ Rotator balance is in accordance with BS5625 standard 12.5

Underspeed Protection
Overexcitation Protection

Δ High-quality lubrication sealed long-time bearing

TIF (1960 Weightings)

Δ Rotator silicon steel close tight

Excitation System

Control Panel -Comap AMF20

The base mounted control panel in a vibration isolated sheet steel enclosure. The control panel is mounted on a base.

a) Instruments: Analogue Voltmeter, Hours Run Meter, Water pressure Meter.

b) Controls: Emergency Stop Pushbutton, Voltmeter Phase Selector Switch.

c) Control module: Standard collocation is Comap AMF20

Main Features:

Δ Automatic or manual start/stop of the generator

Δ 3 phase AMF function

Δ configuration analog inputs

Δ Configurable programmable binary inputs

Δ Warm-up and cooling functions

Δ Battery voltage, engine speed measurement

Δ Modem communication support (IL-422)

Δ RS232 interface

Δ Support of engines equipped with J1939 interface

Δ Graphic back-lit LCD display

Δ Comprehensive diagnostic message codes; KWP2000 Support

Δ 6 LED indicators

Δ Sealed to IP65

Δ Generator C.B and Mains C.B control return timer



Control module Comap AMF 20

Optional SYK1 (SuYang) Automatic Transfer Switch Without/With Cabinet

The Automatic Transfer Switch Without/With Cabinet Main Function as follows:

ATS can automatically transfer load between the main power and the emergency power (generator) without operator. When the main power fails or voltage drops below 80% of normal voltage, the emergency generating set after a preset time 0-10 seconds (adjustable), and transfer the load power (generating set). Contrarily, when the main power recovers normal, the ATS will transfer emergency power (generating set) to the main power, and then stop the emergency power.

Optional 1-ATS without Cabinet (Can be installed on the control panel Directly)

Δ Small Size/Operator conveniently

Δ ATS 63A-1100A with Economical Cost

Optional 2-ATS With Cabinet

Δ Mains on lamp

Δ Mains on load lamp

Δ Gensets on lamp

Δ Gensets on load lamp

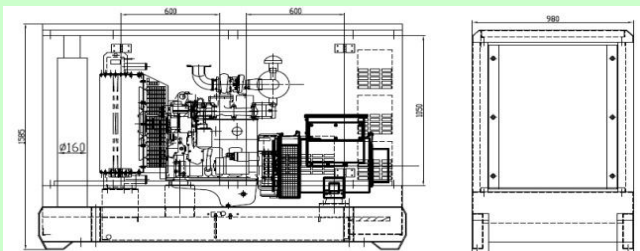
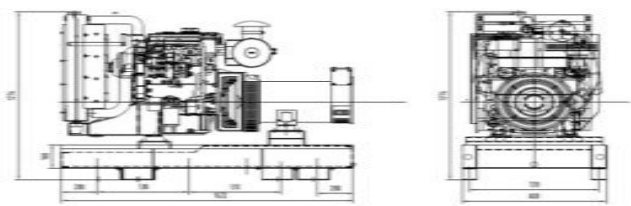
Δ Mode Transfer Switch

Δ Emergency Stop

Δ ATS 63A-3200A



Sound Attenuated Enclosure/Option



Robust Corrosion Resistant

Δ Black finish stainless steel lock and
Δ body made from steel component

Excellent Access for Maintenance

Δ two large doors on each side
Δ radiator fill access plate
Δ lube oil and cooling water drains from the enclosure

Security and Safety

Δ control panel viewing window in door
Δ emergency stop push button (re)
Δ cooling fan and battery charging
Δ exhaust silencing system totally

Dimensions and Weights-Open Type

Length (L)	Width (W)	Height (H)	Dry	Wet
mm	mm	mm	kg	kg
2390	940	1511	2060	2140

Dimensions and Weights-Canopy Type

Length (L)	Width (W)	Height (H)	Dry	Wet
mm	mm	mm	kg	kg
3560	1220	1815	2110	2160

Sound Attenuated (SA) Sound Pressure Levels (dBA)

	7m (23ft)		1m (3ft)
75%	100%	75%	100%
Load	Load	Load	Load
	76.9	77.8	77.9 79.7



General Information

Wiring Diagram And Testing

A full set of operation and maintenance manuals and circuit wiring diagrams.

Ambient temperature: -25°C to 45°C. The coolant heater is needed when the temperature is below 5°C

Humidity: Less than 80%.

Inspection items

Protection devices working test

Starting ability in normal temperature

50% rated power load moment capability

Voltage deviation and speed variation: 0%, 25%, 50%,

The customer could also choose the color which the manufacturer offers

Offer a range of optional features to tailor our generator sets to meet your power needs.

Options

50°C High Temperature ● Permanent Magnet Gen ● Auto Control Panel ● Daily Fuel Tank Radiator -erator (PMG Switch(ATS) ● Base Fuel Tank

Water Separator ● Anti Condensation Heater ● Trailer Type

Water Jacket Heater ● Drop CT(For Paralleling) ● Manual Paralleling System ● Automatic Input System

Oil Heater ● Auto Paralleling System Fuel

Oil Discharging Pump ● Electronic Indicator for ● Maintenance Tools Fuel Level ● Accessory Bag



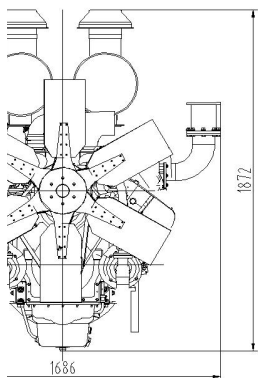
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On Your Side
JOGY CO., LTD.

POWER

Alternator Model

WT274F



GB/T2820, ISO8528; A
dby Power Rating
oof gensets only run

200 hours of operation
he standby power

. and test reports are

ting: 24 months or

PTION

it/hr

12.9

24.3

36.2

48.6

53.6

EM

n-line "P" type

tric type

anical type

hole type

n2 (3556 psi)

cartridge type

el fuel oil

SYSTEM

ressure feed type

ren by crankshaft

cartridge type

5 liters (4.62 gal.)

liters (3.96 gal.)

own 25 deg.

up 35 deg.

side 35 deg.

eration Manual

DATA

in @1,500 rpm

ec @1,500 rpm

in @1,500 rpm

in @1,500 rpm

@1,500 rpm

Pa initial

Pa final

Pa max.

000 m

Pa max.

000 m

TABLE

ft = N.m × 0.737

gal = lit. × 0.264

= 0.2388 kcal/s

= g/kW.h × 0.00162

ft = N.m × 0.737

= m3/min × 35.336

Brushless

Cast alloy aluminum

Single,double shielded

100% copper

Reconnectable

Class H

2/3

Full

AVR SX460

±0.5%

Standard

IP23

<50

SHUNT

Panel is equipped as

with genset

for inputs and outputs

Measurement

(AMF25 only)

Electronic Control Unit

Features; SPN/FMI

Control with feedback and

(In case of generating set)
If the ATS will start
the load to emergency
stop the load from the
generating set.)



t Construction

nd hinges

is treated with

aintenance

pipes to exterior of

ety

a lockable access

**d)mounted on
alternator fully
enclosed for**



;) ● Auto Transfer

m For

