

# SGR-90 Generating set Technical Data Sheet



**ISO9001:2000**



**SOYGEN  
GENERATOR**

## STANDARD SPECIFICATION

### General features:

- Composed of RICARDO diesel engine and Stamford, Sincro or DG series Stamford COPY brushless alternator
- 12V DC start motor and storage battery
- Brushless, Self-excited, IP23, insulation class H alternator
- 50°C radiator as standard
- Key start panel control system as standard, digital auto-start panel is optional
- 160 Lt fuel tank in base frame
- Optional open type or silent type
- All generator sets are gone through rigorous testing before being released to the market place, including 50% load, 75% load, 100% load , 110% load and all protection function (overspeed stop, high water temperature, low oil pressure, battery charging fail, emergency stop)

### Genset Main Technical Data

3P4W, 50Hz, 220/380V (Can Be Made According To Customers' Special Requirements)

GENSET MODEL	Genset Specification					Engine Specification				Alternator Model
	KVA		Cons 100% (L/H)	dB(A) @7m	Tank (L)	Model	Cyl	Gov.	Asp.	
	ESP	PRP								
SGR-90	90	81	18	78	160	R4105IZD	4	E	TCA	SGR-90

1) Available in various voltages

2) To show SOYGEN Generating Sets Model

3) ESP=Standby power standby duty, operation under variable load, without overload.

PRP=Prime power continuous duty operation, under variable load, 10% overload permissible 1/12hr.

4) E=Electronic speed governor;

M=Mechanical speed governor

5) Asp=Aspiration; NA=Naturally

Asp; TC=Turbocharged;

TW=Turbocharged after cooled;

TCA= Turbocharged air-air after cooled

6) Technical data is subject to work test conditions

## Reliable Performance

### Voltage regulation

Voltage regulation maintained within  $\pm 0.5\%$  as follow:

- Power factor Between 0.8~1.0 lag
- From no load to full load, any steady load
- Speed droop variation under 4.5%

### Frequency/Speed undulation

- Change load from 0-100%, Frequency/Speed Droop Ratio within 5%.
- Load from 25-100%, any steady load Frequency/Speed undulation within 0.25%

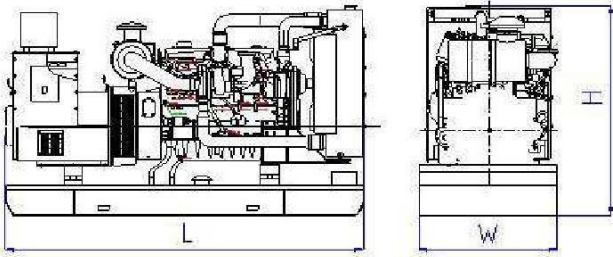
### Effect factor of telecom

- TIF( MA MG1-22) better than 50
- THF( BS EN60034) better than 2%

## Criterion

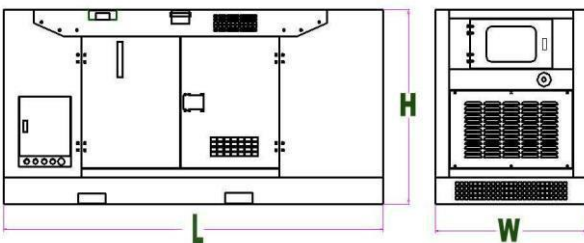
- ISO8528, GB/T2820
- EN12601:2001, EN60034-22:1997, EN60204-1:2006
- ISO9001:2000 Quality Control System

## Dimension and Weight



### Open Type

Overall size (L\*W\*H)  
1650\*1000\*1040  
Weight: 1350kg



### Silent Type

Overall size (L\*W\*H)  
2400\*1000\*1650  
Weight: 1240kg

## ENGINE SPECIFICATION

### RICARDO Diesel Engine Technical Data

Engine Model	R4105IZD
Number of Cylinders	4
Cylinder arrangement	Vertical in-line
Cycle	Four stroke
Aspiration	Turbocharged Air-Air Aftercooled
Bore×Stroke (mm×mm)	105*130
Displacement (Liter)	4.33
Compression Ratio	16:1
Prime Power/Speed (kW/rpm)	65/1500RPM
Standby Power/Speed (kW/rpm)	75/1500RPM
Speed Governor	Electronic
Cooling System	Water-cooled, 50°C radiator is standard
Speed Stability (%)	≤1%
Total lubrication system capacity (L)	14
Coolant capacity (without radiator) (L)	27
Fuel Consumption at 100% Load (L/H)	218
Starter Motor	DC12V
Start type	Electrical

## Alternator SPECIFICATION

### SOYGEN ALTERNATOR (Standard) Technical Data

Alternator Model	SGR-90
Exciter type	Brushless, Self-excited
Power factor	0.8
Voltage Adjust range	≥5%
Voltage Regulation NL-FL	≤±0.5%
Insulation Grade	H
Protection Grade	IP23

## Control System

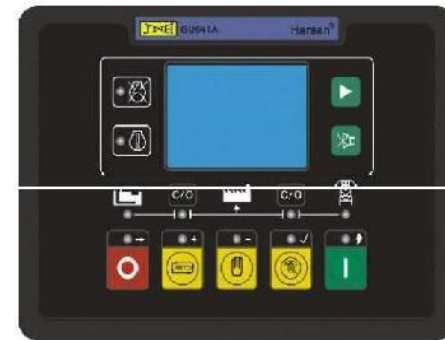
1. Standard: DATAKOM D300 MK2 AMF Digital Controller Providing the standard functions as follows:  
 (Also can be made according to the customers' special requirements)

- \* Automatic Start/Stop
- \* Settings can be adjustable via key buttons on front panel
- \* 3 start attempts failure and Automatic Crank Disconnect
- \* Parameters display (V/A/Hz/Hour)
- \* Engine monitoring and protection
- \* Charge alter nator exciting and Charge alternator fail alarm
- \* Running hour counting (1) DSE7320 \* Emergency stop pushbutton



- \* Alarm System: Over speed, High Engine Temperature Low Oil Pressure, Charge Fail

- \* Protection System: Over speed, High Engine Temperature, Low Oil Pressure, Emergency Stop. And the other protection function pre-setting



Digital Auto-start Generator controller integrating digital, intelligent and network techniques is used for automatic control system of diesel generator. It can carry out functions including automatic start/stop, data

measure and alarming. Optionally assembled with the ATS, it can carry (2) GU641B out auto-switching between the outer power and generating set power.

(AMF)

2. Option: Harsen GU641B AMF Digital Auto Start
3. Option: ComAp AMF25 Digital Auto Start
4. Option: Deepsea DSE3110 Digital Auto Start



(3) AMF25



(4) DSE3110