

# Diesel Genset Model SGN140 PR



(A Shapoorji Pallonji Company)

Specification reference no. SGN140 PR-11-R-1



## Rating Range

Prime	kW	112
	kVA	140
Rated Current	I <sub>t</sub>	194 Amps
Voltage	V	415 Volts
Frequency	F	50 Hz
Power Factor	pF	0.8 Lag

## Standards

- The Engine Performance corresponds to ISO 3046, BS 5514, DIN 6271
- The Genset ratings are based on ISO 8528
- The transient performance of the D.G. set conforms to ISO 8528-5, class G-3
- The fuel consumption data is based on calorific value and parameters of fuel confirming to IS 1460
- The Alternator confirms to IEC 60034 - B

## Features

- Global presence
- Most energy efficient D.G. set in its own rating
- The DG set and the related accessories are prototype tested, factory built and production tested at the respective factories. Fully automatic. Wider maintenance intervals and as such longer TBO
- 100% testing of each set with computerized test bench
- "Well experienced and trained engineers for 24 X 7 After sale support"
- Designed to meet the latest environmental norms and certified by CPCB nodal Agency

## Rating Guide - Prime Rating

These ratings are applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power.

**Note:** Rating guidelines conforms to ISO 8528 - 1 and the generators are prime rated generators.



Manufactured by,  
**Sterling Generators Pvt. Ltd.**  
(A Shapoorji Pallonji Company)



## ALTENERGY TECHNOLOGIES PVT. LTD.

(Authorised Business Partners of Socomec Innovative Power Solutions Pvt. Ltd.)  
Corp. cum Mktg. Office: S-1/40, Vedant Commercial Complex, Vartak Nagar, Pokhran Road # 1,  
Thane (W) -400606, Maharashtra, India Tel: +91-22-2588 6403 / +91-9321882840 / +91-9321882841  
Email: altenergytech@yahoo.in / mktg.altenergy@yahoo.in  
Branches: Pune, Thane, Bhiwandi (Maharashtra), Alappuzha & Thiruvalla (Kerala)

Engine Technical Details			
Design Data		Air Intake System	
Make	Mahindra Navistar	Air take restriction	
Model	6.12 TCA	- with clean element	230 mm of H <sub>2</sub> O
Engine BHP	174	- with dirty element	600 mm of H <sub>2</sub> O
No. Cylinders	6		
Cylinder arrangement	Inline	Cooling System	
Method of operation	4 - Stroke	Radiator Cooling	
Speed	1500 rpm	Coolant capacity	25 liters
Aspiration	Turbo Charged, Aftercooled	Radiator fan load	7KW
Cooling method	Radiator	Type of water pump	Engine driven
Governor type	Mechanical		
Governing class	Class A1	Lubrication System	
Compression ratio	16.8:1	Type oil	15W40 API - CI4
Displacement	7.12 liter	Type of oil filters	Spin on replaceable
Bore / Stoke	105 / 137 mm	No. of oil filters	1
Dry weight	598.6 Kgs.	Oil system capacity	19.8 liters
		Oil cooling method	Water cooled
		Oil change intervals	500 hrs./6months* (whichever is earlier)
Fuel System			
Type of fuel filters	Spin on type paper elem.		
No. of fuel filters	Primary - 1 no.		
	Secondary - 1 no.		
Filter capacity	5 Micron	Exhaust System	
Filter change period	500 Hours. / 6 months (whichever is earlier)	Silencer type	Hospital-grade
		No. of silencers	One
		Silencer out let dia.	125 mm
Air Intake System		Silencer insertion loss	32% approx.
Type of air filter	Dry type	Max. allowable back pressure	75 mm of Hg
No. of air filters	One		

Alternator Technical Details			
Make	Crompton Greaves Ltd.	AVR type	SR - 7/6
Frame	G1R250MA	Voltage regulation	+/- 1%
Rating KVA	140	Excitation current in Adc	
KW	112	- No load	0.5 Amps
Voltage Variation	+/- 20%	- Full load	2.5 Amps
Rated full load current	194.8	Short-circuit ratio	0.465
Enclosure-as per IS: 4691	IP 23	Wave form distortion THF	Less than 2%
Altitude MSL	1000 m	Stator winding connection	Star connected
Ambient	40°C	Bearings - DE	Not available
Insulation - Stator	Class H	- NDE	6313.2RS
- Rotor	Class H	Cable entry	Left Hand Side from D.E.
Temp. Rise - IS : 12802 above 40°C Amb	125°C	Terminal box position	Mounted on top of alternator
		Lubrication	"Castrol AP3 / Shell Alvania G3 / Servogem 3"
Governing standards	IS: 13364 (Part 1 & 2), IS: 4722, BS 5000 (PART 99), IEC 34.	Over speed	2250 rpm
Excitation type	Self excited, Self regulated, Brushless	Weight	516 KG
Rectifier bridge type	3 Phase 6 Pulse	Direction of rotation	Clockwise from drive end
System response time	500 ms	Cooling air	30 m3 / min

Genset Control Panel			
SG 1100 : Standard Supply		SG 2200 : Optional	
Features		Features	
Start/Stop		Start/Stop	
Local and Remote Start/Stop		Local and Remote Start/Stop	
Generator Set Breaker Control		Mains Monitoring	
Easily Accessible		Generator Set Breaker Control	
		Main Breaker Control	
Display		Easily Accessible	
Engine Parameters:			
RPM		Display	
Oil Pressure		Engine Parameters:	
Coolant Temperature		RPM	
Hour Meter		Oil Pressure	
Battery Volts		Coolant Temperature	
Battery Charging Voltage		Hour Meter	
Running Status		Battery Volts	
Event Recording		Battery Charging Voltage	
Electrical Parameters		Running Status	
Voltage, Current, Hz, kVA, PF, kWh, kW and kVAR		Event Recording	
Genset Breaker Status		Electrical Parameters	
Engine Protection		Voltage, Current, Hz, kVA, PF, kWh, kW and kVAR	
High Water Temperature		Breaker Status	
Low Lube Oil Pressure		Engine Protection	
Engine over speed shutdown		High Water Temperature	
Electrical Protection		Low Lube Oil Pressure	
kW Overload		Engine Over speed Shutdown	
Unbalanced Load		Electrical Protection	
Under/Over Voltage		kW Overload	
Under/Over Frequency		Unbalanced Load	
Over Current Protection		Under/Over Voltage	
Breakers		Under/Over Frequency	
4 pole D.G. outgoing contactors of 250amp. rating		Over Current Protection	
		Breakers	
		4 pole D.G. outgoing contactors of 250 amp. rating	
		4 pole mains contactor of 250 amp. rating	

Generator Set Parameters			
Performance Data			
Fuel consumption*:		g/hp-h	Ltrs/Hrs.
	- 100 % Load	198	30.01
	- 75 % Load	197	22.39
	- 50 % Load	212	16.06
Lube oil consumption*	0.015 Ltrs/ Hr.		

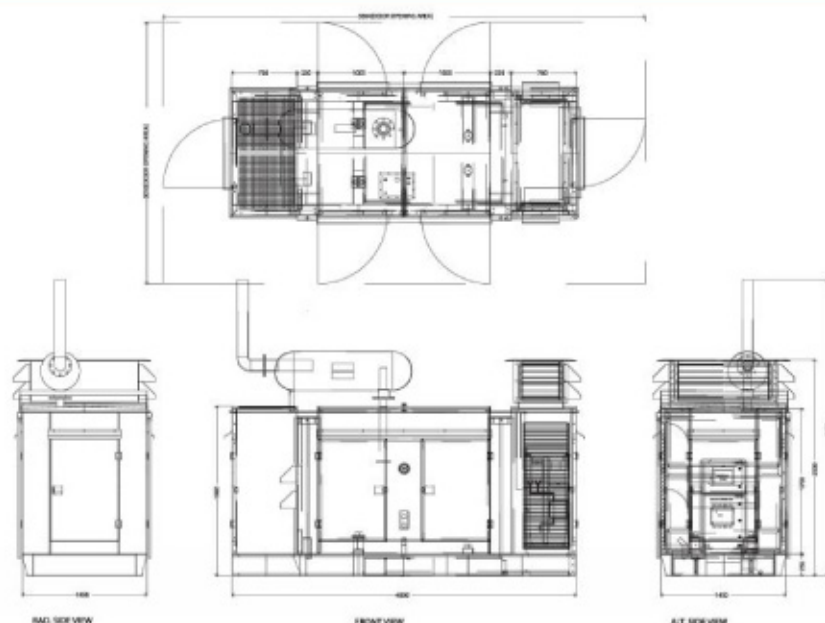
\*Note: with 5% tolerance



Generator Set Accessories			
<b>Base Frame</b>		<b>Antivibration Mounts</b>	
Construction	Folded sheet metal, CRCA	Make	Polybond
Colour	Black	Location	Above the base frame
<b>Fuel Tank</b>		<b>Canopy</b>	
Capacity	320 liters.	Surface material	M. S. CRCA, 1.6 Thk.
Location	Inside canopy	Acoustic material	35mm synth. foam
Construction	M. S. CRCA, 2.0 Thk.	Colour	Royal blue
Attachments	Breather	Ventilation - Fresh air inlet	top of alternator end
		- Hot air	top of radiator end
<b>Batteries</b>		Lighting system	D C Bulb with door switch
Make	HBL nife	Total air requirement	11800 CFM
Rating	1X24 Volts	Attachments	Dial type fule gauge
AH capacity	20		Emergency stop switch
			Diesel filling cap with lock

Optional Accessories	
High & low fuel level switch	Amf panel with mains contactor
Electronic fuel level gauge	Leroy somer or stamford alternator
Electronic governor	

### Genset Dimensions



Length (mm)	4000
Width (mm)	1450
Height (mm) H1	2500
Weight (Dry) Kgs.	3000
Weight (Wet) Kgs.	3200

### Warranty Policy

1. Only metal parts come under warrantee and is limited to manufacturing defects and poor workmanship.
2. The warrantee period is valid through 26 months from the date of dispatch or 24 months from the date of commissioning or 5000 hours of operation (which ever occurs first).

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Specifications are subject change due to continuous improvement of the product.