

60Hz/1800 r.p.m-P.F.0.8					Prime Power	Standby Power	Rated Current
Genset	Engine	Alternator	Voltage (V)	PH	kW/kVA	kW/kVA	Amps
FC210X-F	R6110ZLDS2	LSA46.2M5 UCI274G FPA27-1508	380/220	3	168/210	184/230	303.9
		LSA46.2M3 UCI274G FPA27-1407	208/120	3	168/210	184/230	555.2
		LSA46.2M3 UCI274G FPA27-1407	220/127	3	168/210	184/230	524.9
		LSA44.2L12 UCI274G FPA27-1407	230/132	3	168/210	184/230	502.1
		LSA44.2L12 UCI274F FPA27-1407	480/277	3	168/210	184/230	240.6

Ratings:

All three Phase generator sets are rated at 0.8 power factor. All single-phase generator sets are rated at 0.8 or 1.0 power factor. POWERGEN reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

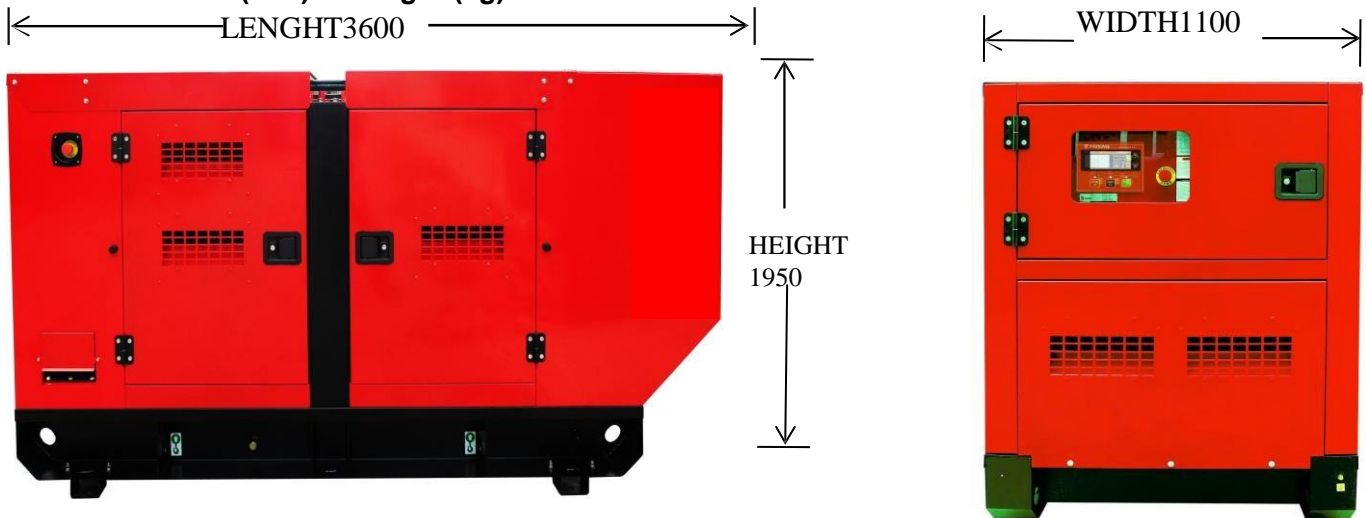
Prime Power:

Available continuously at variable load in lieu of commercially purchased power for an unlimited number of hours per year in accordance with ISO8528-1, and an overload of 10% permitted for one hour in every twelve hours of operation in accordance with ISO 3046-1.

Standby Power:

Emergency Standby Power in variable load applications in accordance with ISO8528-1 in the event of a utility power failure. No overload available for this service as relevant alternators are peak continuous rated at 27°C.

Overall Dimensions (mm) & Weight (kg)



Weight (kg) : 2450

Standard and Optional Accessories

System	Standard ●	Optional ○
Air Intake System	<ul style="list-style-type: none"> ● Standard air filter ● Air filter overload alarm 	<ul style="list-style-type: none"> ○ Air prefilter ○ Heavy air filter
Cooling System	<ul style="list-style-type: none"> ● 50°C radiator ● Low water level alarm ① ● Fan and belt guard 	<ul style="list-style-type: none"> ○ Antifreeze ○ Water jacket heater
Exhaust System	<ul style="list-style-type: none"> ● Discharge valve ● Stainless steel bellow ● Residential silencer ● Complete exhaust pipe 	<ul style="list-style-type: none"> ○ Stainless steel silencer ○ Stainless steel exhaust pipe
Fuel System	<ul style="list-style-type: none"> ● Rain cap ● 8 Hours integrated base fuel tank ● Standard fuel filter ● Fuel level gauge ● Fuel filling cap 	<ul style="list-style-type: none"> ○ 6 Hours double wall base fuel tank ○ Fuel-water separator ○ Oil level sensor ②③ ○ Automatic fuel top-up system ②
Lubrication System	<ul style="list-style-type: none"> ● Fuel hose ● Standard oil filter ● Manual oil pump and drain 	<ul style="list-style-type: none"> ○ Oil heater ○ Lube oil level indicator
Alternator and Electric Switch	<ul style="list-style-type: none"> ● Shunt or self excited ● Class H insulation ● H class temperature rise ● DELIXI MCCB ● Terminal connection lugs (L1, L2, L3, LN) 	<ul style="list-style-type: none"> ○ Oil temperature indicator ② ○ PMG or AREP (Leroy-Somer only) ○ Alternator space heaters ○ PT100 winding temperature sensors ○ Weaver AVR ○ Weaver prolapse transformer ○ F class temperature rise ○ 4 Pole circuit breaker with leakage protection ○ Circuit breaker - 4 pole ○ ABB MCCB ○ MCCB auxiliary contact and shunt tripping device
Control System	<ul style="list-style-type: none"> ● Comap Nano Plus for 4 cylinders engine ● Comap Intelilite AMF20 for 6 cylinders or ECU engine 	<ul style="list-style-type: none"> ○ Panel lighting
Silent / Base	<ul style="list-style-type: none"> ● 67-72 db(A) @ 3 meters ● 4mm -6mm Steel base ● Transportation support leg ● Single hook ● Power coating enclosure ● Anti-vibration mounting between engine /alternator and baseframe ● Emergency stop mounted outside the 	<ul style="list-style-type: none"> ○ Forklift holes ○ Enclosure color: ○ Trailer for off road or on road
Start / Charge	<ul style="list-style-type: none"> ● Standard color: Ral 3020 ● Battery with bracket and cables ● Engine battery charger ● 3A Mains charger 	<ul style="list-style-type: none"> Low temperature starting batteries Battery switch High current charger (10A, 20A)

Remark: ① Not available for Perkins 400 series engines

- ② When you need the automatic oil top up system, you have to use the electrical oil level sensor.
- ③ You can choose either electrical oil level sensor or oil temperature sensor.

Engine

Engine specifications		Fuel System	
Manufacture	Kofo	Type injection system	Indirect
Engine model	R6110ZLDS2	Injection Fuel consumption at 100% standby power	56.8
Engine type	4 cycle, in-	Litres/hou Fuel consumption at 100% prime power	51.6
line Engine speed	1800	Litres/hou Fuel consumption at 75% prime power	41.3
r.p.m Prime power		Litres/hou Fuel consumption at 50% prime power	31.0
190 kW Standby power		Litres/hou Fuel consumption at 25% prime power	15.5
209 kW Governor type		Litres/hour Fuel tank capacity	
Mechanical Steady speed adjusting ratio at rated condition		Lubrication System	
≤5		8-12 hours Oil sump capacity	18 Litres
Aspiration: Turbocharged, air-to-air charge cooling		Oil pressure	0.3-0.5 Mp
Displacement	7.69 L	Oil pressure at idle speed	≥0.1 Mp
Bore * Stroke	110 ×135 mm	Lubricating method	Pressure lubrication
NO. of cylinders	6	Oil consumption rate	1.63 g/kWh
Compression ratio	16.0:1	Max continuous oil temperature	105°C
Engine idle speed	≤650 rpm	Cooling system	
Fring order	1-5-3-6-2-4	Total system capacity	23 Litre
Flywheel ring gear teeth number	130	Thermostat operation range	76-85 °C
Noise level @7m	74 dBA	Maximum top tank temperature	96°C
Exhaust system		Electric System	
Exhaust gas temperature	≤600°C	Starting method	Electric motor star
Exhaust outlet size	66 mm	Electrical system voltage	24V
Air intake system		Battery	Maintenance-free
Maximum air intake restriction		Connecting cables	Available
- Standard filter	≤2.5 kPa		
- Air filter type	Dry		

Alternator

60Hz/1800R.P.M

General data		Insulation class	
H Power factor	Cos φ =0.8	Bearing	
Single Excitation	Shunt / Brushless	Altitude	≤ 1000 m

Ratings
Prime Power Standby Power

Brand	Alternator	Number of wires	AVR Model	PH	Voltage (V)	kW/kVA	kW/kVA
Leroy-Somer Stamford Tide	N/A UCI274G N/A	4	AS440	1	240 (220-240)	N/A 120/150 N/A	N/A N/A N/A
Leroy-Somer Stamford Tide	LSA46.2M5 UCI274G FPA27-1508	12	R250 AS440 SX460	3	380/220	164/205 160/200 165/206	182/227 170/215 182/227.5
Leroy-Somer Stamford Tide	LSA46.2M3 UCI274G FPA27-1407	12	R250 AS440 SX460	3	208/120	164/205 164/205 168/210	180/225 174.8/218.5 185/231
Leroy-Somer Stamford Tide	LSA46.2M3 UCI274G FPA27-1407	12	R250 AS440 SX460	3	220/127	176/220 174.8/218.5 168/210	190/237 187.2/234 185/231
Leroy-Somer Stamford Tide	LSA44.2L12 UCI274G FPA27-1407	12	R250 AS440 SX460	3	230/132	158/198 174.8/218.5 168/210	174/217 187.2/234 185/231
Leroy-Somer Stamford Tide	LSA44.2L12 UCI274F FPA27-1407	12	R250 AS440 SX460	3	480/277	164.8/206 165/206.3 168/210	180/225 175/218.8 185/231

Control System



Comap Nano Plus

Comap IntelliLite AMF20

Comap IntelliLite AMF25

Viewable parameters	Phase voltage	3	3	3
	Wire voltage	3	3	3
	Current	Instrument	3	3
	Frequency	●	●	●
	Active power	×	●	●
	Reactive power	×	●	●
	Apparent power	×	●	●
	Power factor	×	●	●
Generator protection	Electric energy metering	×	×	●
	Abnormal voltage	●	●	●
	Over-current warning	×	●	● Over
	current protection	×	●	● Over
	Frequency protection	●	●	● Short
Engine figure	circuit protection	MCCB	MCCB+○	MCCB+○
	Oil pressure	●	●	●
	Water temperature	●	●	●
	Fuel level	○	○	○
	Speed	●	●	●
	Battery voltage	●	●	●
Engine protection	Elapsed time	●	●	●
	Low oil pressure warning	●	●	●
	Low oil pressure protection	●	●	●
	High temperature warning	●	●	●
	High temperature protection	●	●	●
	Overspeed warning	●	●	●
Function	Overspeed protection	●	●	●
	Charge fault	●	●	●
	Remote start-stop	●	●	●
	AMF	●	●	●
	Programmable input	3	7	7
	Programmable output	6	7	7
	Port extension	USB	○	○
	Remote monitoring	×	○	○
	Communication port	×	○	○
	CAN	●	○	●
	Start/Stop time control	×	×	●
	Maintenance tips	×	×	●
Fault record	×	×	●	
Multi-language function	×	●	●	

Remark: ● Standard ○ Optional × NA

(Safety Installation: Detect - Control – Switch System)

POWERGEN offers not only a changeover switch but also an integrated mains detection and switch system for your 24 Hour Power Protection. The system enables automatic start-up and operation of the generating set in the event of a mains power failure, overvoltage or loss of phase; and also mains automatic re-transfer once it come back. The system has a wide application such as hospital, bank, telecom, air port, broadcasting station and hotels.

System Advantages

- Automatically transfer and re-transfer load from main power to gen-power without operator intervention.operation. (Both automatic and manual)
- ATS Controller (AMF function), seamless integration with Intelligent 5.0
- Available from 32 – 3200A, better protection for 4 pole switch.
- Available in standard, bypass isolation and service-entrance configurations.
- Configurable in open, closed and programmed transition operating modes.
- Designed to interface seamlessly with POWERGEN generators and switchgear.
- Drip Proof IP23 Enclosure.
- Easy Installation: Wall-mounted & Floor standing
- Comes fully loaded with the technology to do the job.



Rated Current	Breaker Type			
	A	Chinese	ABB	Socomec
32	x		B	x
63	A		B	B
80	x		x	B
100	A		B	B
125	x		B	B
160	B		B	B
200	x		B	x
250	C		B	B
300	x		x	x
315	x		C	x
400	C		C	C
630	C		D	D
800	D		D	D
1000	D		D	D
1250	D		D	D
1600	D		D	E
2000	E		E	E
2500	E		E	E
3200	E		x	E

Dimensions : mm

A : 400x200x500

B : 500x300x650

C : 600x400x1200

D : 800x600x1400

E : 1000x800x1600