

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
FC63X-F	R4105ZDS2	LSA 44.3 S3 UCI224G FPA22-546	240 (220-240)	1	50/63	60/75	262.5
		LSA 44.3 S2 UCI 224D FPA22-454	380/220	3	50/63	60/75	95.0
		LSA 42.3 L9 UCI 224E FPA22-454	208/120	3	50/63	60/75	173.5
		LSA 42.3 L9 UCI 224D FPA22-454	220/127	3	50/63	60/75	164.0
		LSA 42.3 L9 UCI 224D FPA22-454	230/132	3	50/63	60/75	156.9
		LSA 42.3 M8 UCI 224D FPA22-454	480/277	3	50/63	60/75	75.2

**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.

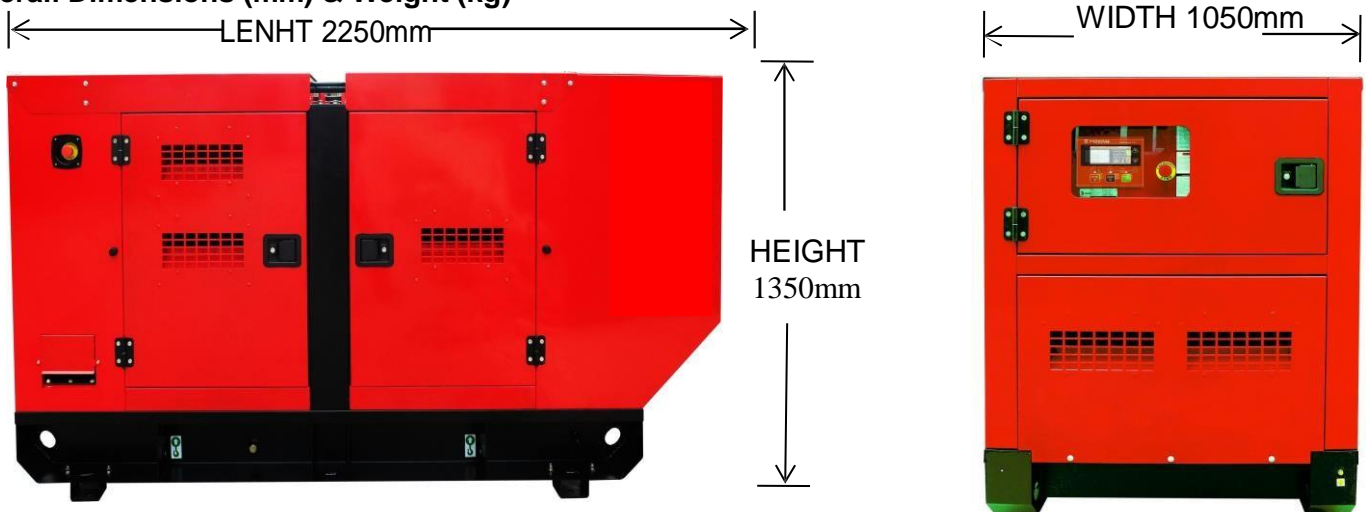
**Prime Power:**

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) : 1500**

# Standard and Optional Accessories



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

- 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.

## Engine

### Engine specifications

Manufacture	Kofo
Engine model	R4105ZDS2
Engine type	4 cycle, in-
line Engine speed	1800
r.p.m Prime power	
60 kW Standby power	
66 kW Governor type	
Mechanical Steady speed adjusting ratio at rated condition	
≤5	
Aspiration:	Turbocharged
Displacement	3.61 L
Bore * Stroke	105 x125 mm
NO. of cylinders	4
Compression ratio	17.0:1
Engine idle speed	≤650 rpm
Fring order	1-3-4-2
Flywheel ring gear teeth number	130
Noise level @7m	71 dBA
<b>Exhaust system</b>	
Exhaust gas temperature	≤600°C
Exhaust outlet size	63 mm
<b>Air intake system</b>	

Maximum air intake restriction	
- Standard filter	≤1.20 kPa
- Air filter type	Dry

## Alternator

**60Hz/1800R.P.M**

### General data

Power factor	Cos φ = 0.8
Excitation	Shunt / Brushless

### Fuel System

Type injection system	Indirect
Injection Fuel consumption at 100% standby power	17.9
Litres/hou Fuel consumption at 100% prime power	16.3
Litres/hou Fuel consumption at 75% prime power	13.0
Litres/hou Fuel consumption at 50% prime power	9.8
Litres/hou Fuel consumption at 25% prime power	4.9
Litres/hour Fuel tank capacity	
<b>Lubrication System</b>	
8-12 hours Oil sump capacity	15 Litres
Oil pressure	0.3-0.5 Mpa
Oil pressure at idle speed	≥0.1 Mpa
Lubricating method	Pressure lubricatio
Oil consumption rate	1.63 g/kW.h
Max continuous oil temperature	105°C
<b>Cooling system</b>	
Total system capacity	16 Litre
Thermostat operation range	76-85 °C
Maximum top tank temperature	96°C
<b>Electric System</b>	
Starting method	Electric motor star
Electrical system voltage	24V

Battery	Maintenance-free
Connecting cables	Available

Insulation class	H
Bearing	Single
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	LSA 44.3 S3 UCI224G FPA22-546	4	R250 AS440 SX460	1	240 (220-240)	54/68 56/70 51/64	60/75 N/A 56/70
Leroy-Somer Stamford Tide	LSA 44.3 S2 UCI 224D FPA22-454	12	R250 AS440 SX460	3	380/220	55/69 50/63 50/62.5	61/76 53/66 55/69
Leroy-Somer Stamford Tide	LSA 42.3 L9 UCI 224E FPA22-454	12	R220 AS440 SX460	3	208/120	52/65 54/67.5 54/67.5	57.2/71.5 58/72.5 60/75
Leroy-Somer Stamford Tide	LSA 42.3 L9 UCI 224D FPA22-454	12	R220 AS440 SX460	3	220/127	55/69 50/63 54/67.5	60.7/75.9 53/66 60/75
Leroy-Somer Stamford Tide	LSA 42.3 L9 UCI 224D FPA22-454	12	R220 AS440 SX460	3	230/132	57.6/72 50/63 54/67.5	64/80 53/66 60/75
Leroy-Somer Stamford Tide	LSA 42.3 M8 UCI 224D FPA22-454	12	R220 AS440 SX460	3	480/277	50/63 52/65 54/67.5	55/69 57/71.3 60/75

## 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	●	●	●
	Elapsed time	●	●	●
Engine protection	Low oil pressure warning	●	●	●
	Low oil pressure protection	●	●	●
	High temperature warning	●	●	●
	High temperature protection	●	●	●
	Overspeed warning	●	●	●
	Overspeed protection	●	●	●
Function	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
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