

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
FC30X-F	Y480BD2	LSA42.3S5 PI144H FPA16-1284	240 (220-240)	1	15/19	16.5/20.6	125.0
		LSA42.3VS2 PI144H FPA16-1284	380/220	3	15/19	16.5/20.6	45.6
		LSA42.3VS1 PI144F FPA16-1284	208/120	3	15/19	16.5/20.6	83.3
		LSA42.3VS1 PI144E FPA16-1284	220/127	3	15/19	16.5/20.6	78.7
		LSA42.3VS1 PI144E FPA16-1284	230/132	3	15/19	16.5/20.6	75.3
		LSA42.3VS1 PI144E FPA16-1284	480/277	3	15/19	16.5/20.6	36.1

**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.

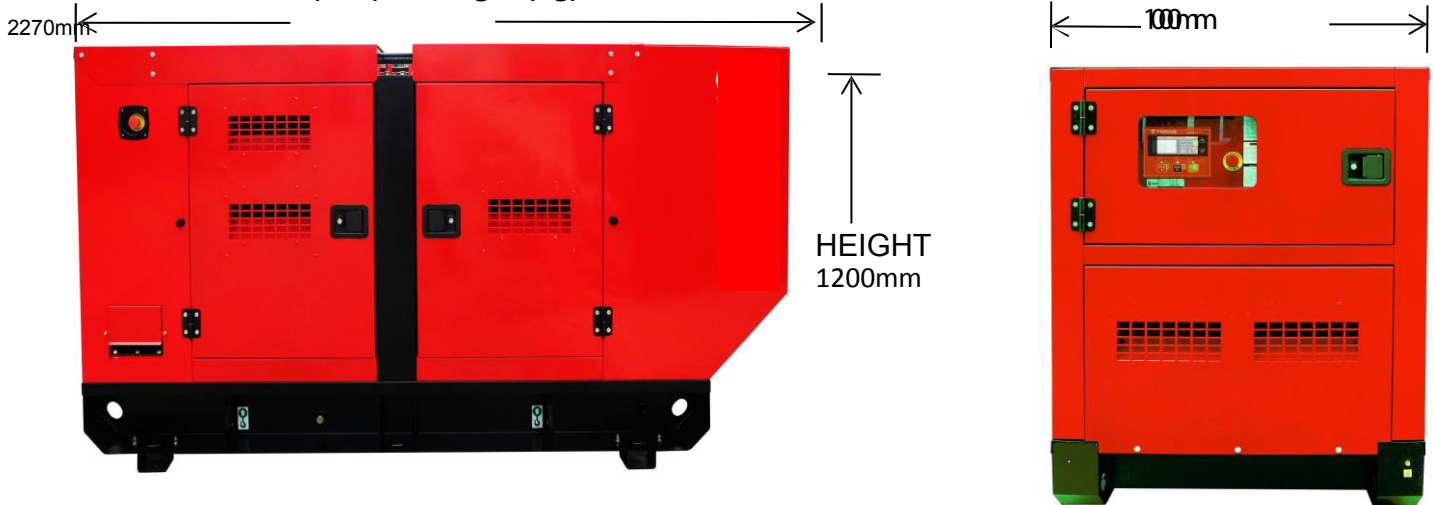
**Prime Power:**

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): 1150**

## 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</li> <li>● Fan and belt guard</li> <li>● Discharge valve</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>● 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> <li>● Fuel hose</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 ① ②</li> <li>○ Automatic fuel top up system ①</li> </ul>
<b>Lubrication System</b>	<ul style="list-style-type: none"> <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> <li>○ Oil temperature indicator ①</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>○ 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> <li>● Standard color: Ral 3020</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>● 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 When you need the automatic oil top up system, you have to use the electrical oil level sensor.
- ② You can choose either electrical oil level sensor or oil temperature sensor.

## Engine

Engine specifications	
Manufacture	KOFO
Engine model	Y480BD2
Engine type	4 cycle, in-line
Engine speed	1800 r.p.m
Prime power	15 kW
Standby power	16.5 kW
Governor type	Mechanical
Steady speed adjusting ratio at rated condition	≤5
Aspiration:	Naturally aspirated
Displacement	3.26 L Bore × Stroke
Stroke	95 × 115 mm NO. of cylinders
	4
Compression ratio	19.0:1
Engine idle speed	≤650 rpm
Firing order	1-3-4-2
Flywheel ring gear teeth number	130
Noise level @7m	68 dBA
Exhaust system	
Exhaust gas temperature	≤600°C
Exhaust outlet size	47 mm
Air intake system	
Maximum air intake restriction	
- Standard filter	≤1.20 kPa
- Air filter type	Dry

Fuel System	
Type injection system	Indirect Injection
Fuel consumption at 100% standby power	10.0 Litres/hour
Fuel consumption at 100% prime power	9.1 Litres/hour
Fuel consumption at 75% prime power	7.3 Litres/hour
Fuel consumption at 50% prime power	5.5 Litres/hour
Fuel consumption at 25% prime power	2.7 Litres/hour
Fuel tank capacity	8-12 hours
Lubrication System	
Oil sump capacity	13 Litres
Oil pressure	0.2-0.4 Mpa
Oil pressure at idle speed	≥0.1 Mpa
Lubricating method	Pressure lubrication
Oil consumption rate	2.04 g/kW.h
Max continuous oil temperature	100°C
Cooling system	
Total system capacity	13 Litres
Thermostat operation range	76-85 °C
Maximum top tank temperature	96°C
Electric System	
Starting method	Electric motor start
Electrical system voltage	12V
Battery	Maintenance-free
Connecting cables	Available

## Alternator

General Data	
Power factor	Cos φ = 0.8
Excitation	Shunt / Brushless

Insulation class	H Power
Bearing	Single
Altitude	≤ 1000 m

60Hz/1800R.P.M

## Ratings

Brand	Alternator	Number of	AVR Model	PH	Voltage (V)	Prime Power	Standby Power
						kW/kVA	kW/kVA
Tide	FPA18-2510	4	SX460	1	240 (220-240)	15/19	16.5/20.6
Tide	FPA16-1284	1	SX460	3	380/220	15/19	16.5/20.6
Tide	FPA18-208	2	SX460	3	208/120	15/19	16.5/20.6
Tide	FPA18-208	1	SX460	3	220/127	15/19	16.5/20.6
Tide	FPA18-208	2	SX460	3	230/132	15/19	16.5/20.6
Tide	FPA18-208	1	SX460	3	480/277	15/19	16.5/20.6

## CONTROL SYSTEM



Comap Nano Plus

Comap IntelliLite

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	×	●	●
	Electric energy metering	×	×	●
Generator protection	Abnormal voltage	●	●	●
	Over-current warning	×	●	●
	Over current protection	×	●	●
	Over Frequency protection	●	●	●
	Short circuit protection	MCCB	MCCB+○	MCCB+○
Engine figure	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	●	●	●
	Charge fault	●	●	●
Function	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

## Automatic Transfer Switch

A.T.S - 4 Poles

### (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