

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
FC350X-C	WT12D-330	LSA47.2VS1 HCI444D FPA31-2605	380/220	3	280/350	308/385	531.8
		LSA46.2VL12 HCI444ES FPA31-2403	208/120	3	280/350	308/385	971.5
		LSA46.2VL12 HCI444D FPA31-2403	220/127	3	280/350	308/385	918.5
		LSA46.2VL12 HCI444D FPA31-2403	230/132	3	280/350	308/385	878.6
		LSA46.2VL12 HCI444D FPA31-2403	480/277	3	280/350	308/385	421.0

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.

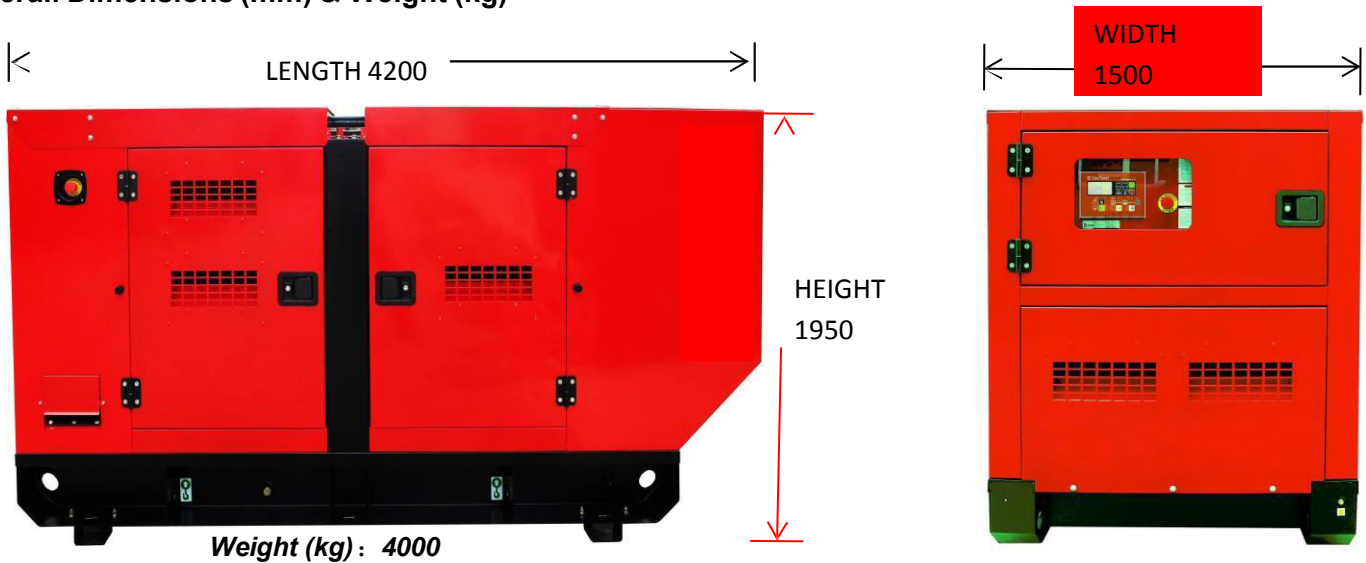
Prime Power:

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)



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 ● Fan and belt guard ● Discharge valve 	<ul style="list-style-type: none"> ○ Antifreeze ○ Water jacket heater
Exhaust System	<ul style="list-style-type: none"> ● Stainless steel bellow ● Residential silencer ● Complete exhaust pipe ● Rain cap ● 8 Hours integrated base fuel tank 	<ul style="list-style-type: none"> ○ Stainless steel silencer ○ Stainless steel exhaust pipe ○ 6 Hours double wall base fuel tank
Fuel System	<ul style="list-style-type: none"> ● Standard fuel filter ● Fuel level gauge ● Fuel filling cap ● Fuel hose ● Standard oil filter 	<ul style="list-style-type: none"> ○ Fuel-water separator ○ Oil level sensor ① ② ○ Automatic fuel top up system ① ○ Oil heater
Lubrication System	<ul style="list-style-type: none"> ● Manual oil pump and drain ● Shunt or self excited 	<ul style="list-style-type: none"> ○ Lube oil level indicator ○ Oil temperature indicator ① ○ PMG or AREP (Leroy-Somer only)
Alternator and Electric Switch	<ul style="list-style-type: none"> ● Class H insulation ● H class temperature rise ● DELIXI MCCB ● Terminal connection lugs (L1, L2, L3, LN) 	<ul style="list-style-type: none"> ○ 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 ○ Panel lighting
Control System	<ul style="list-style-type: none"> ● Comap Nano Plus for 4 cylinders engine ● Comap InteliLite AMF20 for 6 cylinders 	
	<ul style="list-style-type: none"> ● or ECU engine ● 67-72 db(A) @ 3 meters ● 4mm -6mm Steel base ● Transportation support leg 	<ul style="list-style-type: none"> ○ Forklift holes ○ Enclosure color:
Silent / Base	<ul style="list-style-type: none"> ● Single hook ● Power coating enclosure ● Anti-vibration mounting between engine /alternator and baseframe ● Emergency stop mounted outside the canopy ● Standard color: Ral 3020 	<ul style="list-style-type: none"> ○ Trailer for off road or on road
Start / Charge	<ul style="list-style-type: none"> ● 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:	<ul style="list-style-type: none"> 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		Fuel System	
Manufacture	Kofo	Type injection system	Indirect Injection
Engine model	WT12D-330	Fuel consumption at 100% standby power	89.1 Litres/hour
Engine type	4 cycle, in-line	Fuel consumption at 100% prime power	81.0 Litres/hour
Engine speed	1800 r.p.m	Fuel consumption at 75% prime power	64.8 Litres/hour
Prime power	320 kW	Fuel consumption at 50% prime power	48.6 Litres/hour
Standby power	352 kW	Fuel consumption at 25% prime power	24.3 Litres/hour
Governor type	Mechanical	Fuel tank capacity	8 hours
Steady speed adjusting ratio at rated condition	≤5	Lubrication System	
Aspiration:	Turbocharged, air-to-air charge cooling	Oil sump capacity	30 Litres
Displacement	11.6 L	Oil pressure	0.35-0.55 Mpa
Bore * Stroke	126 x155 mm	Oil pressure at idle speed	≥0.08 Mpa
NO. of cylinders	6	Lubricating method	Pressure lubrication
Compression ratio	17.0:1	Oil consumption rate	1.63 g/kW.h
Engine idle speed	≤650 rpm	Max continuous oil temperature	105°C
Fring order	1-5-3-6-2-4	Cooling system	
Flywheel ring gear teeth number	136	Total system capacity	45 Litre
Noise level @7m	78 dBA	Thermostat operation range	76-85 °C
		Maximum top tank temperature	96°C
Exhaust system		Electric System	
Exhaust gas temperature	≤600°C	Starting method	Electric motor start
Exhaust outlet size	75 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

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

60Hz/1800R.P.M	
Insulation class	H
Bearing	Single
Altitude	≤ 1000 m

Ratings

Brand	Alternator	Number of wires	AVR Model	PH	Voltage (V)	Prime Power	Standby Power
						kW/kVA	kW/kVA
Leroy-Somer Stamford Tide	LSA47.2VS1	12	R230	3	380/220	308/385	341/426
	HCI444D		AS440			280/350	300/375
	FPA31-2605		SX440			285/356	314/392.5
Leroy-Somer Stamford Tide	LSA46.2VL12	12	R250	3	208/120	286/357	319/399
	HCI444ES		AS440			305/381	325/406
	FPA31-2403		SX440			288/360	310/388
Leroy-Somer Stamford Tide	LSA46.2VL12	12	R250	3	220/127	298/372	332/415
	HCI444D		AS440			288/360	308/385
	FPA31-2403		SX440			288/360	310/388
Leroy-Somer Stamford Tide	LSA46.2VL12	12	R250	3	230/132	302/378	338/423
	HCI444D		AS440			300/375	320/400
	FPA31-2403		SX440			288/360	310/388
Leroy-Somer Stamford Tide	LSA46.2VL12	12	R250	3	480/277	305/381	343/429
	HCI444D		AS440			300/375	320/400
	FPA31-2403		SX440			288/360	310/388

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	×	●	●
	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

(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	Breakey 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