

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
PGCLS400	KTA19-G2	LSA47.2S4 HCI444F FPA31-3208	380/220	3	350/438	400/500	664.7
		LSA47.2VS2 HCI444FS FPA31-3007	208/120	3	350/438	400/500	1214.4
		LSA47.2VS2 HCI444FS FPA31-3007	220/127	3	350/438	400/500	1148.2
		LSA47.2VS2 HCI444E FPA31-3007	230/132	3	350/438	400/500	1098.3
		LSA47.2VS2 HCI444E FPA31-3007	480/277	3	350/438	400/500	526.2

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.

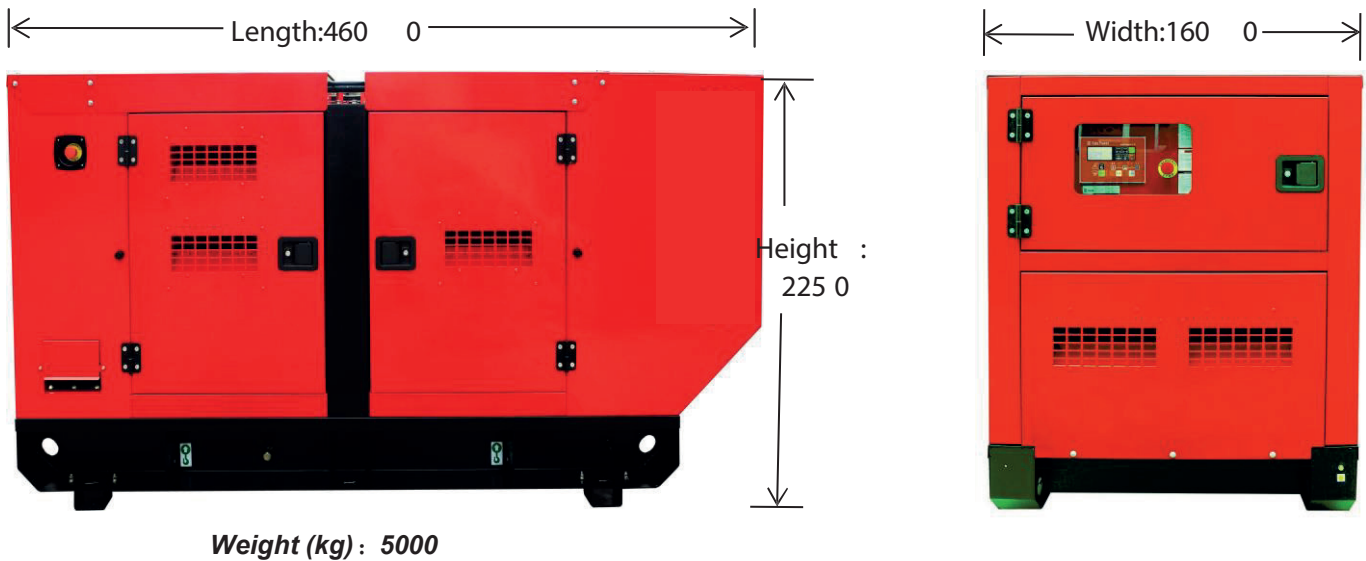
Prime Power:

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)



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 	<ul style="list-style-type: none"> ○ Stainless steel silencer ○ Stainless steel exhaust pipe
Fuel System	<ul style="list-style-type: none"> ● 8 Hours integrated base fuel tank ● Standard fuel filter ● Fuel level gauge ● Fuel filling cap ● Fuel hose 	<ul style="list-style-type: none"> ○ 6 Hours double wall base fuel tank ○ Fuel-water separator ○ Oil level sensor ① ② ○ Automatic fuel top up system ①
Lubrication System	<ul style="list-style-type: none"> ● Standard oil filter ● Manual oil pump and drain 	<ul style="list-style-type: none"> ○ Oil heater ○ Lube oil level indicator ○ Oil temperature indicator ①
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"> ○ 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 IntelliLite 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 canopy ● Standard color: Ral 3020 	<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"> ● 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 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		Lubrication System	
Manufacture	CCEC Cummins	Oil capacity (high - low)	38-32 Litres
Engine model	KTA19-G2	Maximum allowable oil temperature	121 °C
Engine type	4 cycle, in-line, 6-cylinder	Total System Capacity	
Engine speed	1800 r.p.m	- Sump plus filters	50 Litres
Prime power	392kW/525hp	Fuel System	
Standby power	448kW/600hp	Type injection system	Direct injection cummins PT
Governor type	Electronic	Maximum Fuel Flow to Injection Pump	394 Litres/hour
Aspiration:	Turbocharged & Aftercooled	Fuel consumption at 100% standby power	113 Litres/hour
Displacement	18.9 L	Fuel consumption at 100% prime power	98 Litres/hour
Bore * Stroke	159mm x 159mm	Fuel consumption at 75% prime power	76 Litres/hour
NO. of cylinders	6	Fuel consumption at 50% prime power	55 Litres/hour
Compression ratio	13.9:1	Fuel consumption at 25% prime power	35 Litres/hour
Brake mean effective pressure	675-775 r/min	Fuel tank capacity	6 hours
Piston speed	9.5 m/s	Cooling System	
Firing order	1- 5-3 -6 -2 -4	Coolant capacity - engine only	30 Litres
Noise level @7m	78 dBA	Standard thermostat (modulating) range	82 - 93 °C
Exhaust System		Maximum allowable top tank temperature	
Maximum back pressure	10 kPa	- Standby power	104 °C
Exhaust pipe size normally acceptable	127 mm	- Prime power	100 °C
Exhaust gas temperature	493-513 °C	Electric System	
Exhaust gas flow	1543 Litres/sec.	Electrical system voltage	24V
Air Intake System		Battery	Maintenance-free
Maximum intake air restriction with heavy duty air cleaner		Connecting cables	Available
- Dirty element	6.23 kPa	Thermal Data	
- Clean element	3.73 kPa	Radiated heat to ambient	59-68kW
Recommended intake piping size	N/A	Heat rejection to coolant	240-274kW
Intake air flow	581 Litres/sec.	Heat rejection to exhaust	299-344kW

Alternator

60Hz/1800R.P.M

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

Insulation class	H	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	LSA47.2S4		R250			360/450	400/500
Stamford	HCI444F	12	AS440	3	380/220	400/500	440/550
Tide	FPA31-3208		SX440			350/438	385/481
Leroy-Somer	LSA47.2VS2		R250			363/454	400/500
Stamford	HCI444FS	12	AS440	3	208/120	355/444	390/488
Tide	FPA31-3007		SX440			360/450	400/500
Leroy-Somer	LSA47.2VS2		R250			365/456	414/518
Stamford	HCI444FS	12	AS440	3	220/127	365/456	400/500
Tide	FPA31-3007		SX440			360/450	400/500
Leroy-Somer	LSA47.2VS2		R250			365/456	419/524
Stamford	HCI444E	12	AS440	3	230/132	352/440	380/475
Tide	FPA31-3007		SX440			360/450	400/500
Leroy-Somer	LSA47.2VS2		R250			365/456	424/530
Stamford	HCI444E	12	AS440	3	480/277	352/440	380/475
Tide	FPA31-3007		SX440			360/450	400/500

ControlSystem



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

(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, airport, 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		
	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

Controller

StandardParameters

- Gen phase voltage
- Generator frequency
- Engine speed
- Battery voltage
- Engine running hours counter
- Engine temperature
- Oil pressure



WarningandShutdownAlarms

- Low oil pressure
- High engine temperature
- Over speed
- Under speed
- Start failure
- Stop failure
- Emergency stop
- High/low battery voltage
- Aux. shutdown alarm
- Aux. Warning