

60Hz/1800 r.p.m-P.F.0.8					Prime Power	Standby Power	RateCurrent
Genset	Engine	Alternator	Voltage (V)	PH	kW/kVA	kW/kVA	Amps
PGPLS450	2506C-E15TAG1	LSA47.2M7 HCI444F EPA31-3609	380/220	3	400/500	450/563	759.7
		LSA47.2S5 HCI544C EPA31-3609	208/120	3	400/500	450/563	1387.9
		LSA47.2S4 HCI544C EPA31-3609	220/127	3	400/500	450/563	1312.2
		LSA47.2S4 HCI444F EPA31-3609	230/132	3	400/500	450/563	1255.1
		LSA47.2S4 HCI444F EPA31-3609	480/277	3	400/500	450/563	601.4

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.

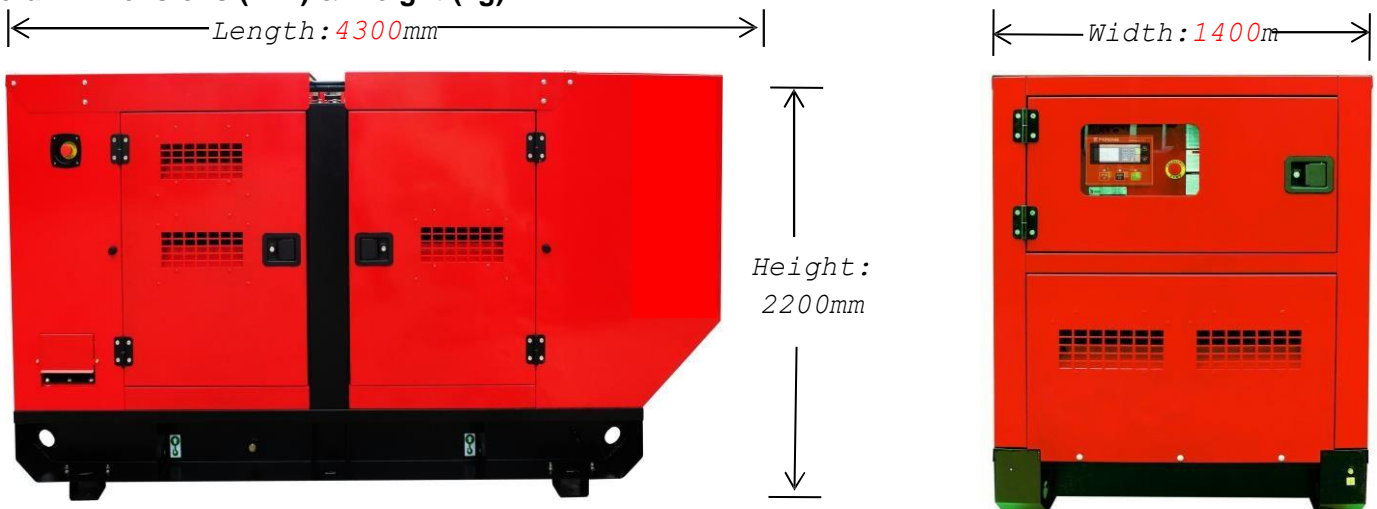
Prime Power:

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) : 5000

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 ● 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 	<ul style="list-style-type: none"> ○ 6 Hours double wall base fuel tank ○ Fuel-water separator ○ Oil level sensor ② ③ ○ 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
Control System	<ul style="list-style-type: none"> ● Comap Nano Plus for 4 cylinders engine ● Comap IntelliLite AMF20 for 6 cylinders 	<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

Manufacture	Perkins
Engine model	2506C-E15TAG1
Engine type	4 stroke, vertical in-line, 6-cylinder
Engine speed	1800 r.p.m
Prime power	435 kW
Standby power	490 kW
Governor type	Electronic
Air intake way	Turbocharged, air-to-air charge cooling
Displacement	15 L
Cylinder bore * stroke	137mm x 171mm
NO. of cylinders	6
Compression ratio	16.0:1
Brake mean effective pressure	2036-2284 kPa
Mean piston speed	10 m/s
Combustion air flow	34.3 m ³ /min
Noise level @7m	78 dBA

Exhaust system

Exhaust gas flow	96 m ³ /min
Exhaust gas temperature	550 °C
Maximum back pressure	6.8 kPa
Aftertreatment exhaust outlet connection	150 mm

Air intake system

Maximum air intake restriction	
- Clean filter	3.7 kPa
- Dirty filter	6.2 kPa
- Air filter type	paper element 457 mm diameter

Lubrication system

Total system capacity	62
Litres Maximum sump capacity	53
Litres Minimum sump capacity	45
Litres Maximum continuous operation	114°C

Fuel system

Type of injection	MEU
Fuel consumption at 100% standby power	114 Litres/hou
Fuel consumption at 100% prime power	100 Litres/hou
Fuel consumption at 75% prime power	77 Litres/hou
Fuel consumption at 50% prime power	57 Litres/hou
Fuel consumption at 25% prime power	30 Litres/hour
Fuel tank capacity	6 hours

Cooling system

Total system capacity	58
Litres Maximum static pressure on pump	170 kPa
Coolant pump speed	1946 rev/min
Thermostat operation range	88-98 °C
Maximum top tank temperature	107°C

Electric system

Electrical system voltage	24 V
Battery	Maintenance-free
Connecting cables	Available

Energy balance

Energy to radiation	29.5-34.5 kW
Energy to exhaust	299-341 kW
Energy to coolant and oil	150-172 kW

Alternator

60Hz/1800R.P.M

General data

H Power factor	Cos φ = 0.8
Single Excitation	Shunt / Brushless
1000 m	

Insulation class	
Bearing	
Altitude	≤

Ratings

Prime Power Standby Power

Brand	Alternator	Number of wires	AVR Model	PH	Voltage (V)	kW/kVA	kW/kVA
Leroy-Somer	LSA47.2M7		R250			450/562	500/625
Stamford	HCI444F	12	AS440	3	380/220	400/500	440/550
Tide	FPA31-3609		SX460			400/500	440/550
Leroy-Somer	LSA47.2S5		R250			408/510	450/562
Stamford	HCI544C	12	AS440	3	208/120	420/525	455/569
Tide	FPA31-3609		SX460			432/540	474/592
Leroy-Somer	LSA47.2S4		R250			400/500	440/550
Stamford	HCI544C	12	AS440	3	220/127	440/550	480/600
Tide	FPA31-3609		SX460			432/540	474/592
Leroy-Somer	LSA47.2S4		R250			405/506	452/566
Stamford	HCI444F	12	AS440	3	230/132	400/500	440/550
Tide	FPA31-3609		SX460			432/540	474/592

Leroy-Somer LSA47.2S4
Stamford HCI444F
Tide FPA31-3609

12

R250
AS440
SX460

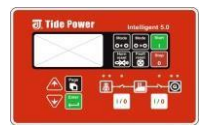
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480/277

410/512
400/500



465/581
440/550
432/540
474/592



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, 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

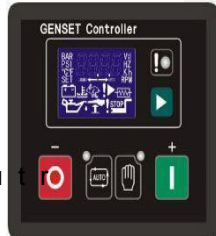
E : 1000x800x1600



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