

# PGPLS250

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
FC281X-P	1506A-E88TAG3	LSA46.2L9 UCDI274J EPA31-2202	<b>380/220</b>	3	225/281	250/313	427.3
		LSA46.2L9 UCDI274K EPA27-20011	<b>208/120</b>	3	225/281	250/313	780.7
		<b>LSA46.2L6</b> UCDI274J EPA27-20011	<b>220/127</b>	3	225/281	250/313	738.1
		LSA46.2L6 UCDI274J EPA27-20011	<b>230/132</b>	3	225/281	250/313	706.0
		LSA46.2L6 UCDI274J EPA27-20011	<b>480/277</b>	3	225/281	250/313	338.3

**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.

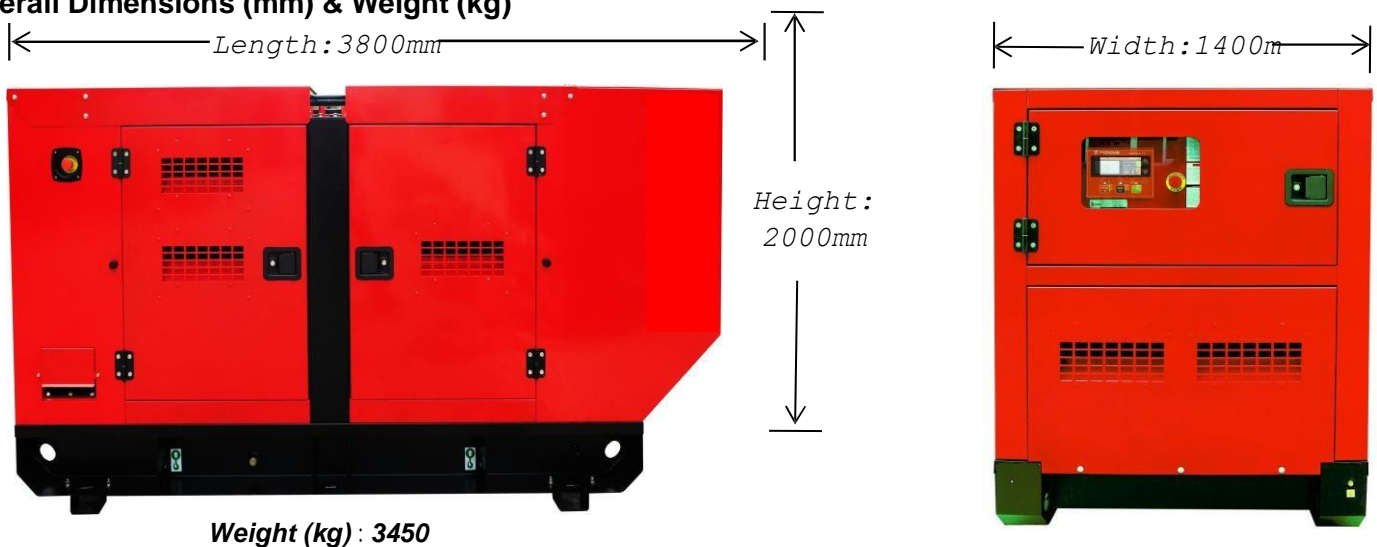
**Prime Power:**

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 ○
<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 ② ③</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 <ul style="list-style-type: none"> <li>○ F class temperature rise</li> </ul> </li> <li>○ 4 Pole circuit breaker with leakage protection</li> <li>○ Circuit breaker - 4 pole <ul style="list-style-type: none"> <li>○ ABB MCCB</li> </ul> </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 Intelilite 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</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>● canopy</li> <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.
- ③ You can choose either electrical oil level sensor or oil temperature sensor.

## Engine

Engine specifications	
Manufacture	Perkins
Engine model	1506A-E88TAG3
Engine type	4 stroke, In-line, 6-cylinder
Engine speed	1800 r.p.m
Prime power	257 kW
Standby power	284 kW
Governor type	Electronic
Air intake way	Air to air after cooled, turbocharged
Displacement	8.8 L
Cylinder bore * stroke	112mm x 149mm
NO. of cylinders	6
Compression ratio	16.1:1
Brake mean effective pressure	2045-2250 kPa
Mean piston speed	8.9 m/s
Combustion air flow	18.6 m <sup>3</sup> /min
Noise level @7m	73 dBA
Exhaust system	
Exhaust gas flow	45.3 m <sup>3</sup> /min
Exhaust gas temperature	477 °C
Maximum back pressure	10 kPa
Aftertreatment exhaust outlet connection	N/A
Air intake system	
Maximum air intake restriction	
- Clean filter	3.7 kPa
- Dirty filter	6.2 kPa
- Air filter type	Dry paper element

Lubrication system	
Total lubrication system capacity	41 Litres
Sump capacity only	36 Litre
Oil temperature (in sump) maximum	120°C
Oil temperature (in sump) normal continuous	115°C
Fuel system	
Type of injection	Direct injection
Fuel consumption at 100% standby power	69.8 Litres/hour
Fuel consumption at 100% prime power	63.1 Litres/hour
Fuel consumption at 75% prime power	47.5 Litres/hour
Fuel consumption at 50% prime power	33.1 Litres/hour
Fuel consumption at 25% prime power	18.9 Litres/hour
Fuel tank capacity	6 hours
Cooling system	
Total system capacity	29.6 Litres
- Engine capacity	13.9 Litres
- With radiator	12.6 Litres
Thermostat operation range	87-98 °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	12-12 kW
Energy to exhaust	191-204 kW
Energy to coolant	115-120 kW

## Alternator

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

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

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	LSA46.2L9	12	R250	3	380/220	237/296	261/326
Stamford	UCDI274J		AS440			240/300	260/325
Tide	FPA31-2202		SX460			240/300	264/330
Leroy-Somer	LSA46.2L9	12	R250	3	208/120	253/316	278/348
Stamford	UCDI274K		AS440			232.8/291	249.6/312
Tide	FPA27-20011		SX460			240/300	264/330
Leroy-Somer	LSA46.2L6	12	R250	3	220/127	231/289	254/317
Stamford	UCDI274J		AS440			224.8/281	244.8/306
Tide	FPA27-20011		SX460			240/300	264/330
Leroy-Somer	LSA46.2L6	12	R250	3	230/132	236/295	262/328
Stamford	UCDI274J		AS440			235.2/294	255.2/319
Tide	FPA27-20011		SX460			240/300	264/330
Leroy-Somer	LSA46.2L6	12	R250	3	480/277	240/300	270/337
Stamford	UCDI274J		AS440			240/300	260/325





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	●	●	● Low
Engine protection	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	×	●	●
<b>Remark:</b> ● 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 TIDE POWER 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