

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
PGPLS132	1106A-70TG1	LSA 46.2 L6 UCDI274J TPA274L9	240 (220-240)	1	120/150	132/165	625.0
		LSA44.3L10 UCI274E TPA274S4	380/220	3	120/150	132/165	227.9
		LSA44.3L10 UCI274E TPA274S4	208/120	3	120/150	132/165	416.4
		LSA44.3M8 UCI274E TPA274S4	220/127	3	120/150	132/165	393.7
		LSA44.3M6 UCI274E TPA274S4	230/132	3	120/150	132/165	376.5
		LSA44.3M6 UCI274E TPA274VS3	480/277	3	120/150	132/165	180.4

**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.

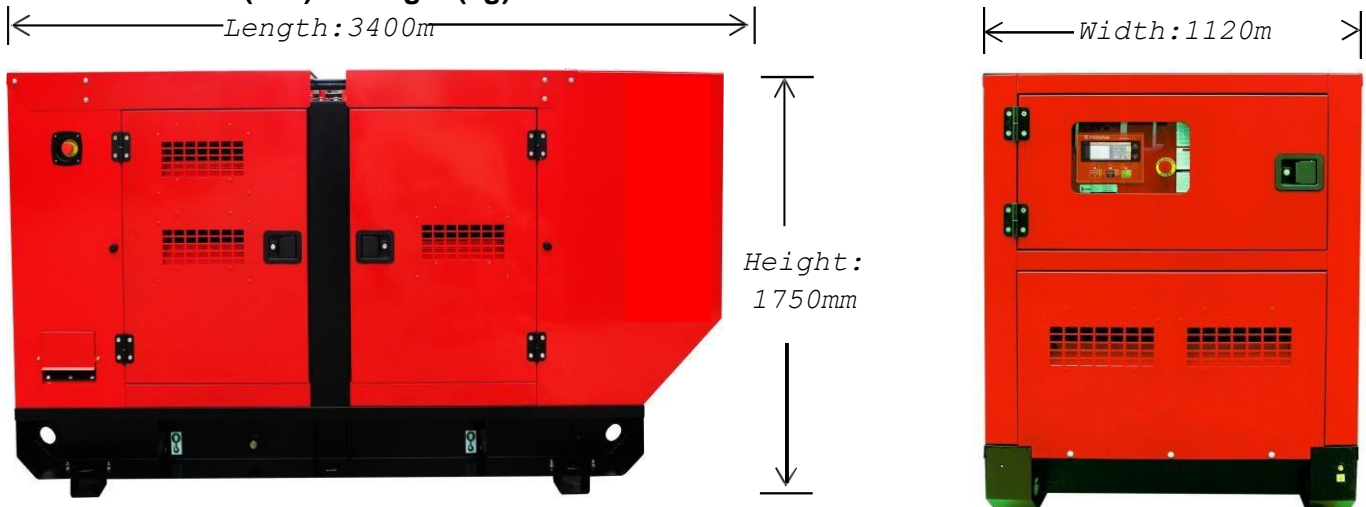
**Prime Power:**

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) : 2450**

## 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> <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 ②③</li> <li>Automatic fuel top up system ②</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 ②</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>Intelligent 1.0 for 4 cylinders engine</li> <li>Intelligent 3.0 for 6 cylinders engine</li> <li>Intelligent 5.0 for 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 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

<b>Engine specifications</b>		<b>Lubrication system</b>	
Manufacture	Perkins	Total Lubrication system capacity	16.5 Litre
Engine model	1106A-70TG1	Minimum sump capacity	12.4 Litre
Engine type	4 stroke, In-line, 6-cylinder	Maximum sump capacity	14.9 Litre
Engine speed	1800 r.p.m	Max continuous oil temperature	125°C
Prime power	134 kW	<b>Fuel system</b>	
Standby power	148 kW	Type of injection	Direct injection
Governor type	Mechanical	Fuel consumption at 100% standby power	38.8 Litres/hour
Air intake way	Turbocharged	Fuel consumption at 100% prime power	35.2 Litres/hour
Displacement	7.01L	Fuel consumption at 75% prime power	26.0 Litres/hour
Cylinder bore * stroke	105mm x 135mm	Fuel consumption at 50% prime power	17.5 Litres/hour
NO. of cylinders	6	Fuel consumption at 25% prime power	10.3 Litres/hour
Compression ratio	18.2 : 1	Fuel tank capacity	8 hours
Brake mean effective pressure	1336.2-1477.9 kPa	<b>Cooling system</b>	
Mean piston speed	8.1 m/s	Total system capacity	21 Litres
Combustion air flow	10.95 m <sup>3</sup> /min	- Engine capacity	9.5 Litre
Engine coolant flow	170 Litres/min	Thermostat operation range	82-93 °C
<b>Exhaust system</b>		Maximum top tank temperature	110 °C
Exhaust gas flow	27.16 m <sup>3</sup> /min	Shutdown switch setting	118°C
Exhaust gas temperature	526 °C	<b>Electric system</b>	
Maximum back pressure	6 kPa	Electrical system voltage	12 V
Aftertreatment exhaust outlet connection	72 mm	Battery	Maintenance-free
<b>Air intake system</b>		Connecting cables	Available
Maximum air intake restriction	5 kPa	<b>Energy balance</b>	
Alternator	8 kPa	Energy to coolant and lubricating oil	60Hz/1300RPM 113.6-124.5 kW
General data	8 kPa	Energy to exhaust	113.6-124.5 kW
Power factor	0.8	Insulation class	13.7-14.9 kW
Air filter type	Paper Element	Energy to radiation	Single
Excitation	Shunt / Brushless	Bearing	
		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	LSA 46.2 L6	12	R250	1	240 (220-240)	138/173	154/192
	UCDI274J		AS440			128.8/161	N/A
	TPA274L9		SX460			125.6/157	135/169
Leroy-somer Stamford Tide	LSA44.3L10	12	R250	3	380/220	118/148	130/163
	UCI274E		AS440			128/160	140/175
	TPA274S4		SX460			120/150	132/165
Leroy-somer Stamford Tide	LSA44.3L10	12	R250	3	208/120	130/163	143/179
	UCI274E		AS440			128/160	140/175
	TPA274S4		SX460			128//160	138/172.5
Leroy-somer Stamford Tide	LSA44.3M8	12	R250	3	220/127	124/155	136/170
	UCI274E		AS440			134/167.5	145/181.3
	TPA274S4		SX460			134/167.5	143/179
Leroy-somer Stamford Tide	LSA44.3M6	12	R250	3	230/132	120/150	132/165
	UCI274E		AS440			134/167.5	145/181.3
	TPA274S4		SX460			134/167.5	143/179
Leroy-somer Stamford Tide	LSA44.3M6	12	R250	3	480/277	125/156	138/172
	UCI274E		AS440			143/178.8	155/193.8
	TPA274VS3		SX460			124/155	133/166



Intelligent 1.0



Intelligent 3.0



Intelligent 5.0

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 <i>Remark:</i> ● Standard	Oil pressure	●	●	●
	Water temperature	●	●	●
	Fuel level	○	○	○
	Speed	○ Optional	×	×
	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	×	●	●	

## (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  
 C : 600x400x1200  
 E : 1000x800x1600

B : 500x300x650  
 D : 800x600x1400

## **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