

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
PGPLS175	1106A-70TG3	LSA46.2M5 UCI274G FPA27-1508	380/220	3	158/197	175/219	300.1
		LSA46.2M3 UCI274G FPA27-1407	208/120	3	158/197	175/219	548.2
		LSA46.2M3 UCI274G FPA27-1407	220/127	3	158/197	175/219	518.3
		LSA44.2L12 UCI274G FPA27-1407	230/132	3	158/197	175/219	495.8
		LSA44.2L12 UCI274F FPA27-1407	480/277	3	158/197	175/219	237.6

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.

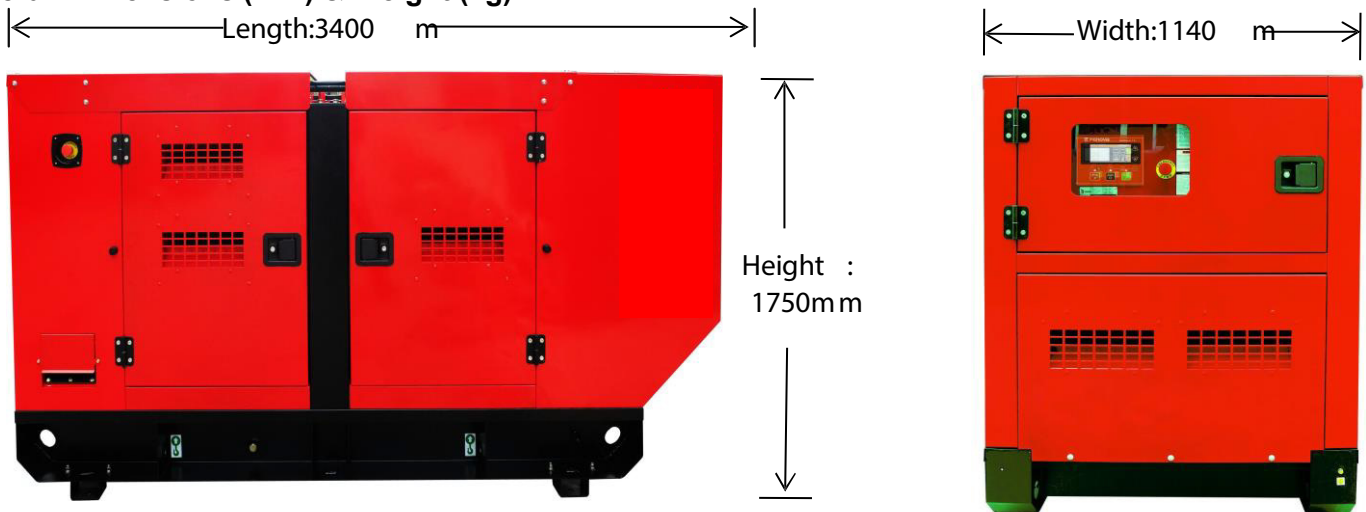
Prime Power:

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): 2480

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 ● 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 ② ③ ○ Automatic fuel top up system ②
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 ②
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 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		Lubrication system	
Manufacture	Perkins	Total Lubrication system capacity	16.5 Lit
Engine model	1106A-70TG3	Minimum sump capacity	12.4 Lit
Engine type	4 stroke, In-line, 6-cylinder	Maximum sump capacity	14.9 Litres
Engine speed	1800 r.p.m	Max continuous oil temperature (in rail)	125°C
Prime power	173 kW	Fuel system	
Standby power	192 kW	Type of injection	Direct injection
Governor type	Mechanical	Fuel consumption at 100% standby power	51.0 Litres/h
Air intake way	Turbocharged and air charge cooled	Fuel consumption at 100% prime power	46.4 Litres/h
Displacement	7.01L	Fuel consumption at 75% prime power	35.3 Litres/h
Cylinder bore * stroke	105mm x 135mm	Fuel consumption at 50% prime power	22.7 Litres/h
NO. of cylinders	6	Fuel consumption at 25% prime power	12.4 Litres/hour
Compression ratio	16:1	Fuel tank capacity	8 hours
Brake mean effective pressure	1715.9-1898.4 kPa	Cooling system	
Mean piston speed	8.1 m/s	Total system capacity	21 Litres
Combustion air flow	15.45 m ³ /min	- Engine capacity	9.5 Litres
Noise level @7m	69 dBA	Thermostat operation range	82-93°C
Exhaust system		Maximum top tank temperature	110°C
Exhaust gas flow	35.42 m ³ /min	Shutdown switch setting	118°C
Exhaust gas temperature	485 °C	Electric system	
Maximum back pressure	6 kPa	Electrical system voltage	12 V
Aftertreatment exhaust outlet connection	72 mm	Battery	Maintenance-free
Air intake system		Connecting cables	Available
Maximum air intake restriction		Energy balance	
- Clean filter	2 kPa	Energy to coolant and lubricating oil	81.5-88.3 kW
- Dirty filter	3 kPa	Energy to exhaust	142.1-159.9 kW
- Air filter type	Paper element	Energy to radiation	17.2-19.5 kW

Alternator

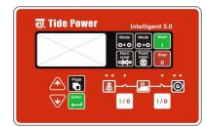
60Hz/1800R.P.M

General data		Insulation class	
Power factor	Cos ϕ = 0.8	Bearing	H
Excitation	Shunt / Brushless	Altitude	Single ≤ 1000 m

Ratings

						Prime Power	Standby Power
Brand	Alternator	Number of wires	AVR Model	PH	Voltage (V)	kW/kVA	kW/kVA
Leroy-Somer	LSA46.2M5		R250			164/205	182/227
Stamford	UCI274G	12	AS440	3	380/220	160/200	170/212.5
Tide	FPA27-1508		SX460			165/206	182/228
Leroy-Somer	LSA46.2M3		R250			164/205	180/225
Stamford	UCI274G	12	AS440	3	208/120	164/205	174.8/218.5
Tide	FPA27-1407		SX460			168/210	185/231
Leroy-Somer	LSA46.2M3		R250			176/220	190/237
Stamford	UCI274G	12	AS440	3	220/127	174.8/218.5	187.2/234
Tide	FPA27-1407		SX460			168/210	185/231
Leroy-Somer	LSA44.2L12		R250			158/198	174/217
Stamford	UCI274G	12	AS440	3	230/132	174.8/218.5	187.2/234
Tide	FPA27-1407		SX460			168/210	185/231
Leroy-Somer	LSA44.2L12		R250			165/206	180/225
Stamford	UCI274F	12	AS440	3	480/277	165/206.3	175/218.8
Tide	FPA27-1407		SX460			168/210	185/231

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

Automatic Transfer Switch

A.T.S - 4 Poles

(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			
	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 count
- 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