

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
PGKT70	N4105ZLDS2	LSA 44.3 S5 UCI274C FPA22-648	240 (220-240)	1	63/79	70/87.5	312.5
		LSA 44.3 S3 UCI 224F FPA22-546	380/220	3	63/79	70/87.5	114.0
		LSA 44.3 S2 UCI 224F FPA22-505	208/120	3	63/79	70/87.5	208.2
		LSA 44.3 S2 UCI 224F FPA22-505	220/127	3	63/79	70/87.5	196.8
		LSA 44.3 S2 UCI 224F FPA22-505	230/132	3	63/79	70/87.5	188.3
		LSA 42.3 L9 UCI 224E FPA22-505	480/277	3	63/79	70/87.5	90.2

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.

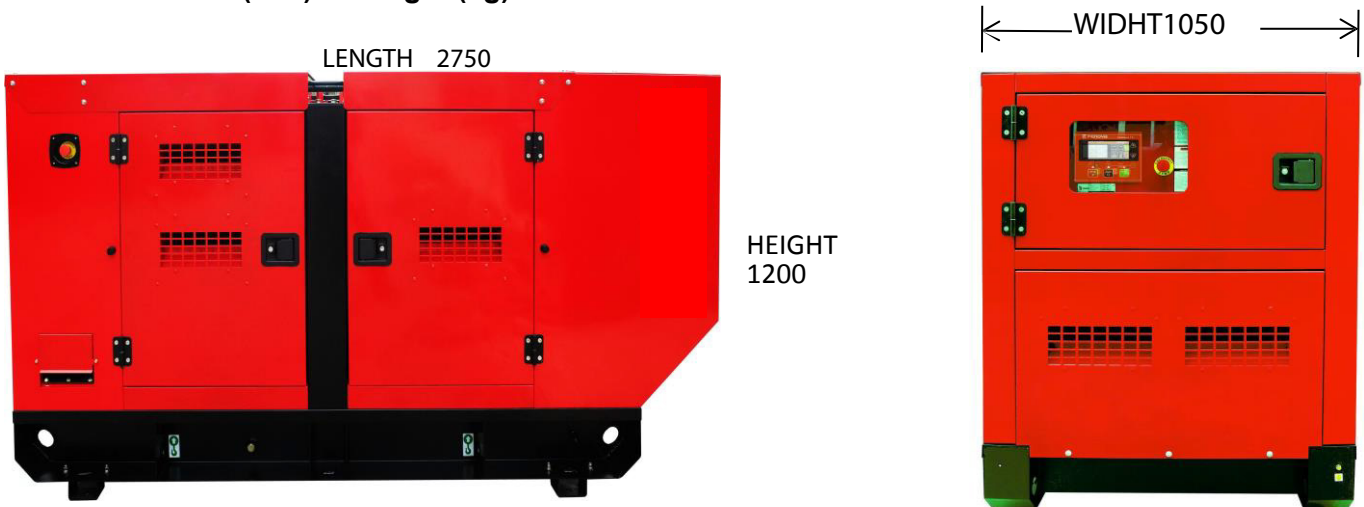
Prime Power:

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)



Weight (kg): 1500

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		Fuel System	
Manufacture	Kofo	Type injection system	Indirect Injection
Engine model	N4105ZLDS2	Fuel consumption at 100% standby power	23.2 Litres/hour
Engine type	4 cycle, in-line	Fuel consumption at 100% prime power	21.1 Litres/hour
Engine speed	1800 r.p.m	Fuel consumption at 75% prime power	17.0 Litres/hour
Prime power	72 kW	Fuel consumption at 50% prime power	12.7 Litres/hour
Standby power	80 kW	Fuel consumption at 25% prime power	6.3 Litres/hour
Governor type	Mechanical	Fuel tank capacity	8-12 hours
Steady speed adjusting ratio at rated condition	≤5	Lubrication System	
Aspiration:	Turbocharged, air-to-air charge cooling	Oil sump capacity	13 Litres
Displacement	4.15 L Bore	Oil pressure	0.2-0.4 Mpa
* Stroke	105 x120 mm NO. of	Oil pressure at idle speed	≥0.1 Mpa
cylinders	4	Lubricating method	Pressure lubrication
Compression ratio	17.0:1	Oil consumption rate	2.04 g/kW.h
Engine idle speed	≤650 rpm	Max continuous oil temperature	105°C
Fring order	1-3-4-2	Cooling system	
Flywheel ring gear teeth number	130	Total system capacity	15 Litres
Noise level @7m	72 dBA	Thermostat operation range	76-85 °C
Exhaust system		Maximum top tank temperature	96°C
Exhaust gas temperature	≤600°C	Electric System	
Exhaust outlet size	63 mm	Starting method	Electric motor start
Air intake system		Electrical system voltage	24V
Maximum air intake restriction		Battery	Maintenance-free
- Standard filter	≤1.20 kPa	Connecting cables	Available
- Air filter type	Dry		

Alternator

60Hz/1800R.P.M

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

Ratings

Brand	Alternator	Number of wires	AVR Model	PH	Voltage (V)	Prime Power	Standby Power
						kW/kVA	kW/kVA
Leroy-Somer	LSA 44.3 S5	4	R250	1	240 (220-240)	68/85	75/94
Stamford	UCI274C		AS440			67.2/84	N/A
Tide	FPA22-648		SX460			60/75	66/82.5
Leroy-Somer	LSA 44.3 S3	12	R250	3	380/220	63/79	70/87
Stamford	UCI 224F		AS440			68/85	73.6/92
Tide	FPA22-546		SX460			63/79	70/87
Leroy-Somer	LSA 44.3 S2	12	R250	3	208/120	61/76	66/83
Stamford	UCI 224F		AS440			67/83.8	73.5/91.9
Tide	FPA22-505		SX460			60/75	66/82.5
Leroy-Somer	LSA 44.3 S2	12	R250	3	220/127	64/80	70/87
Stamford	UCI 224F		AS440			70/87.5	76/95
Tide	FPA22-505		SX460			60/75	66/82.5
Leroy-Somer	LSA 44.3 S2	12	R250	3	230/132	67/84	73.5/92
Stamford	UCI 224F		AS440			70/87.5	76/95
Tide	FPA22-505		SX460			60/75	66/82.5
Leroy-Somer	LSA 42.3 L9	12	R220	3	480/277	60/75	66/82.5
Stamford	UCI 224E		AS440			60/75	64/80
Tide	FPA22-505		SX460			60/75	66/82.5

Control System



Comap Nano Plus

Comap IntelliLite AMF20

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			
	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