

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
FC112X-P	1104C-44TAG2	LSA 44.2 L12 UCI274G TPA274S6	240 (220-240)	1	90/112	100/125	466.7
		LSA44.3M6 UCI274C TPA274VS2	380/220	3	90/112	100/125	170.9
		LSA44.3M6 UCI274C TPA274VS1	208/120	3	90/112	100/125	312.3
		LSA44.3S5 UCI274C TPA224VL7	220/127	3	90/112	100/125	295.2
		LSA44.3S5 UCI274C TPA224VL7	230/132	3	90/112	100/125	282.4
		LSA44.3S4 UCI274C TPA224VL7	480/277	3	90/112	100/125	135.3

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.

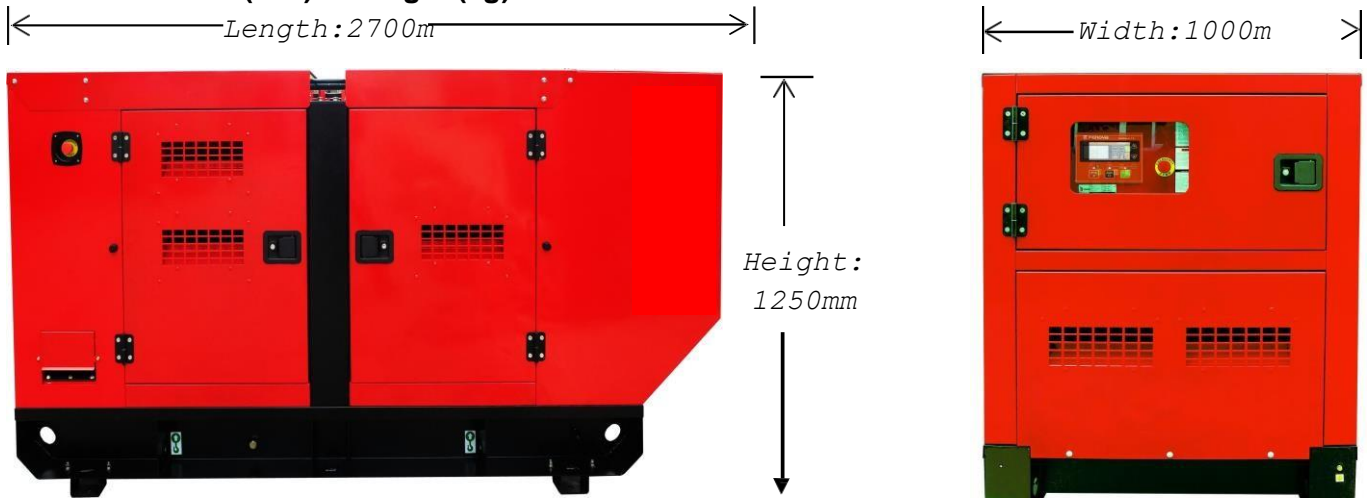
Prime Power:

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)



Weight (kg) : 1400

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 ②③ ○ 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"> • Intelligent 1.0 for 4 cylinders engine • Intelligent 3.0 for 6 cylinders engine • Intelligent 5.0 for 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	8.0 Litre
Engine model	1104C-44TAG2	Minimum sump capacity	5.5 Litre
Engine type	4 stroke, Vertical in-line, 4-cylinder	Maximum sump capacity	7.0 Litre
Engine speed	1800 r.p.m	Max continuous oil temperature	125°C
Prime power	102 kW	Fuel system	
Standby power	112 kW	Type of injection	Direct injection
Governor type	Electronic	Fuel lift pump-flow/hour	120 - 150 Litres/hou
Air intake way	Turbocharged, air-to-air charge cooled	Fuel consumption at 100% standby power	29.7 Litres/hou
Displacement	4.4 L	Fuel consumption at 100% prime power	26.9 Litres/hou
Cylinder bore * stroke	105mm x 127mm	Fuel consumption at 75% prime power	20.2 Litres/hou
NO. of cylinders	4	Fuel consumption at 50% prime power	14.1 Litres/hour
Compression ratio	18.23:1	Fuel tank capacity	8-12 hours
Brake mean effective pressure	1618-1780kPa	Cooling system	
Mean piston speed	7.62 m/s	Total system capacity	
Combustion air flow	7.8 m ³ /min	- With radiator	12.6 Litres
Engine coolant flow	170 Litres/min	- Without radiator	7.0 Litre
Exhaust system		Thermostat operation range	82-93
Exhaust gas flow	20.4 m ³ /min	Maximum top tank temperature	110°C
Exhaust gas temperature	517-574°C	Electric system	
Maximum back pressure	15 kPa	Electrical system voltage	12 V
Exhaust outlet size	64 mm	Battery	Maintenance-free
Air intake system		Connecting cables	Available
Air intake restriction		Energy balance	
General data	5 kPa	60Hz/1800R.P.M	
Power factor	0.8	Energy to coolant and lubricating oil	57.7-64 kW
Air filter type	2 Stage Cyclonic/Paper Element	Insulation class	Single
Excitation	Shunt/Brushless	Energy to exhaust	89.8-99.7 kW
		Bearing	8.5-9.4 kW
		Energy to radiation	<100 W
		Available	

Ratings

Brand	Alternator	Number of wires	AVR Model	PH	Voltage (V)	Prime Power	Standby Power
						kW /kVA	kW /kVA
Leroy-somer	LSA 44.2 L12	12	R250	1	240 (220-240)	88/110	98/123
Stamford	UCI274G		AS440			98.7/123.4	N/A
Tide	TPA274S6		SX460			92/115	100/125
Leroy-somer	LSA44.3M6	12	R250	3	380/220	99/124	109/136
Stamford	UCI274C		AS440			96/120	105.6/132
Tide	TPA274VS2		SX460			100/125	110/137.5
Leroy-somer	LSA44.3M6	12	R250	3	208/120	108/135	119/149
Stamford	UCI274C		AS440			90/112.5	96/120
Tide	TPA274VS1		SX460			90/113	97/121
Leroy-somer	LSA44.3S5	12	R250	3	220/127	92/115	101/126
Stamford	UCI274C		AS440			94/117.5	102/127.5
Tide	TPA224VL7		SX460			89//111	95/119
Leroy-somer	LSA44.3S5	12	R250	3	230/132	92/115	101/126
Stamford	UCI274C		AS440			94/117.5	102/127.5
Tide	TPA224VL7		SX460			89//111	95/119
Leroy-somer	LSA44.3S4	12	R250	3	480/277	90/113	99/124
Stamford	UCI274C		AS440			100/125	110/137.5
Tide	TPA224VL7		SX460			94/117.5	101/126



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 <small>○ Optional</small>	×NA	●	●
	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	×	●	●	

Automatic Transfer Switch

(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: W all-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