

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
PGPLS80	1104A-44TG2	LSA 44.3 L10 UCI274E TPA274S4	240 (220-240)	1	72/90	80/100	375.0
		LSA44.3S4 UCI224G TPA224L6	380/220	3	72/90	80/100	136.7
		LSA44.3S4 UCI224G TPA224L5	208/120	3	72/90	80/100	249.8
		LSA44.3S3 UCI224G TPA224L5	220/127	3	72/90	80/100	236.2
		LSA44.3S3 UCI224G TPA224L5	230/132	3	72/90	80/100	225.9
		LSA44.3S3 UCI224F TPA224M4	480/277	3	72/90	80/100	108.3

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.

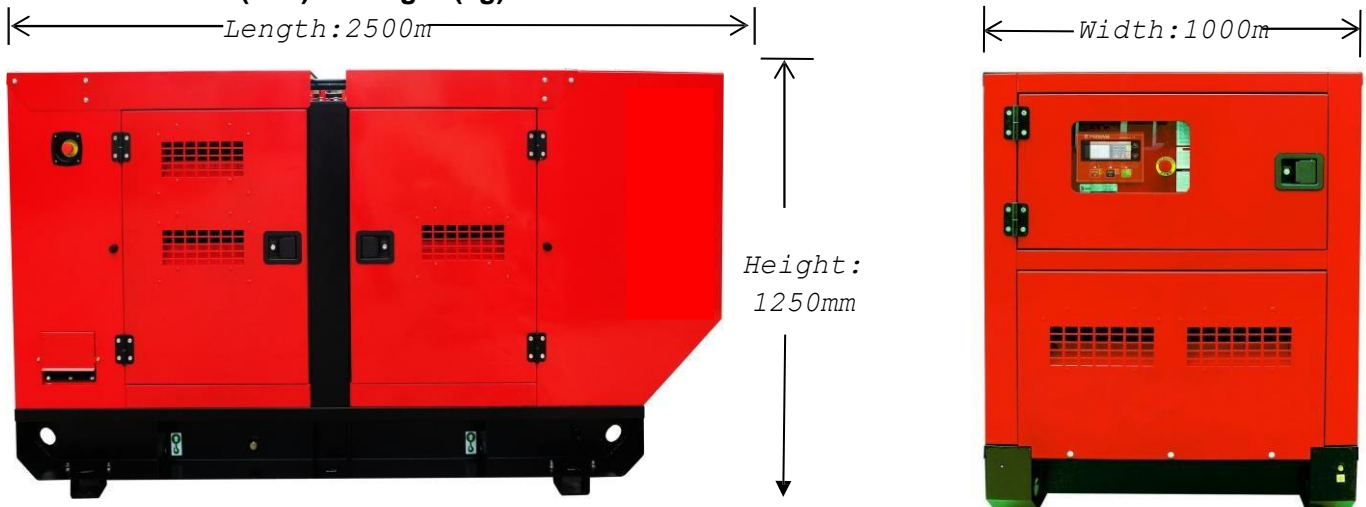
Prime Power:

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): 1300

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 	<ul style="list-style-type: none"> ○ Antifreeze ○ Water jacket heater
Exhaust System	<ul style="list-style-type: none"> ● Discharge valve ● 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 	<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"> ● Fuel hose ● Standard oil filter ● Manual oil pump and drain 	<ul style="list-style-type: none"> ○ Oil heater ○ Lube oil level indicator
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"> ○ Oil temperature indicator ② ○ 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 	<ul style="list-style-type: none"> ○ Panel lighting
Silent / Base	<ul style="list-style-type: none"> ● Intelligent 5.0 for ECU engine ● 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 	<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"> ● Standard color: Ral 3020 ● 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	1104A-44TG2	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	82 kW	Fuel system	
Standby power	90 kW	Type of injection	Direct
Governor type	Mechanical	injection Fuel lift pump-flow/hour	120 - 150
Air intake way	Turbocharged	Litres/hou Fuel consumption at 100% standby power	24.4
Displacement	4.4 L	Litres/hou Fuel consumption at 100% prime power	22.3
Cylinder bore * stroke	105mm x 127mm	Litres/hou Fuel consumption at 75% prime power	16.9
NO. of cylinders	4	Litres/hou Fuel consumption at 50% prime power	11.9
Compression ratio	17.25:1	Litres/hour Fuel tank capacity	
Brake mean effective pressure	1280-1409 kPa	8-12 hours Cooling system	
Mean piston speed	7.62	Total system capacity	
m/s Combustion air flow	6.5	- With radiator	13.0 Litres
m ³ /min Engine coolant flow	170	- Without radiator	7.0 Litre
Litres/min Exhaust system		Thermostat operation range	82-93 °C
Exhaust gas flow	15.85 m ³ /min	Maximum top tank temperature	110°C
Exhaust gas temperature	535-560°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
Maximum air intake restriction		Energy balance	
- Clean filter	5 kPa	Energy to coolant and lubricating oil	53-57
- Dirty filter	8 kPa	kW Energy to exhaust	68-
- Air filter type	Dry	71 kW	
		Energy to radiation	14-15kW

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 L10	12	R250	1	240 (220-240)	76/95	84/105
Stamford	UCI274E		AS440			76.8/96	N/A
Tide	TPA274S4		SX460			78.4/98	86/107.5
Leroy-somer	LSA44.3S4	12	R250	3	380/220	71/89	78/98
Stamford	UCI224G		AS440			80/100	85/106.3
Tide	TPA224L6		SX460			72/90	79/99
Leroy-somer	LSA44.3S4	12	R250	3	208/120	78/98	86/107
Stamford	UCI224G		AS440			75/93.8	81/101.3
Tide	TPA224L5		SX460			71/89	77/96
Leroy-somer	LSA44.3S3	12	R250	3	220/127	74/92	81/101
Stamford	UCI224G		AS440			78/97.5	85/106.3
Tide	TPA224L5		SX460			75/94	80/100
	Leroy-somer Stamford Tide		LSA4 4.3S3	UCI224G 12		TPA2 24L5	R250 AS440

SX460				77/96		84/105	
	3	230/132		80/100		85/106.3	
				75/94		80/100	
Leroy-somer	LSA44.3S3			R250		80/100	88/110
Stamford	UCI224F	12		AS440	3	480/277	75/93.8
							82/102.5
Tide	TPA224M4			SX460		75/94	80/100

ControlSystem



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	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, 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

B : 500x300x650

C : 600x400x1200

D : 800x600x1400

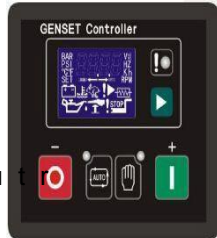
E : 1000x800x1600



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