

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
FC520X-K	DP158LC	LSA47.2M7 HCI 544D FPA35-4002	380/220	3	416/520	460/575	790.1
		LSA47.2M7 HCI 544C FPA31-3609	208/120	3	416/520	460/575	1443.4
		LSA47.2S5 HCI 544C FPA31-3609	220/127	3	416/520	460/575	1364.7
		LSA47.2S5 HCI 544C FPA31-3609	230/132	3	416/520	460/575	1305.4
		LSA47.2S5 HCI 544C FPA31-3609	480/277	3	416/520	460/575	625.5

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.

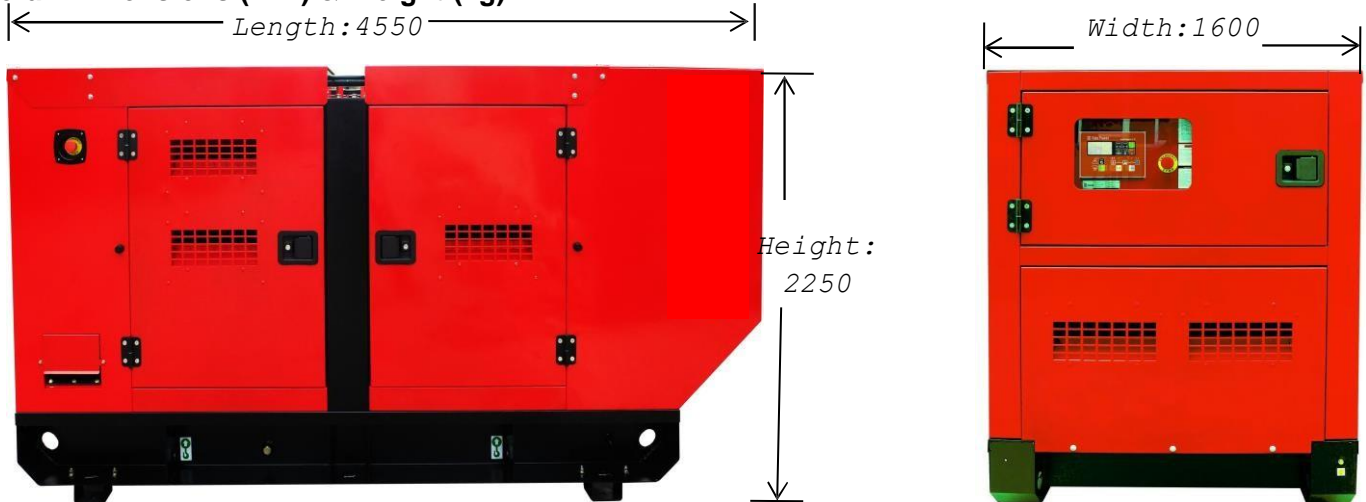
Prime Power:

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) : 4500

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 ● 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 ① ② ○ Automatic fuel top up system ①
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 ① ○ 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 IntelLite 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 	<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 When you need the automatic oil top up system, you have to use the electrical oil level sensor.

② You can choose either electrical oil level sensor or oil temperature sensor.

Engine

Engine specifications		Lubrication System	
Manufacture	DOOSAN DAEWOO	Oil Capacity (Max.- Min.)	22-13 Litre
Engine Model	DP158LC	Lubrication Method	Fully forced pressure feed type
Engine Type	4-Cycle, V-type	Oil Pump	Gear Type Driven by Crank-shaft Gear
Engine Speed	1800 r.p.m	Maximum oil temperature	120°C
Prime Power	466 kW	Fuel System	
Standby Power	513 kW	Type Injection System	Direct Injection
Governor Type	Electronic	Fuel Feed Pump Capacity	315 liters / hour
Aspiration	Turbo charged & intercooled (air to air)	Fuel Consumption at 100% Standby Power	122.7 Litres/hour
Displacement	14.618 L	Fuel Consumption at 100% Prime Power	111.5 Litres/hour
Bore * Stroke	128mm x 142mm	Fuel Consumption at 75% Prime Power	83.4 Litres/hour
NO. of Cylinders	8	Fuel Consumption at 50% Prime Power	57.7 Litres/hour
Compression Ratio	15.0:1	Fuel Consumption at 25% Prime Power	32.3 Litres/hour
Intake Air Flow	32.3 m3/min	Fuel Tank Capacity	6 hours
Rotation	Counter clockwise viewed from flywheel	Cooling System	
Mean Piston Speed	8.5 m/s	Coolant Capacity- Engine Only	20 Litre
Noise Level @3m	67-72 dBA	Coolant Capacity - with Radiator	79 Litre
Exhaust System		Standard Thermostat (Modulating) Range	71-85°C
Exhaust Gas Flow	93 m3/min	Maximum for Standby and Prime	103°C
Exhaust Gas Temperature	518°C	Coolant Flow Rate	660 liters / min
Maximum Back Pressure	5.9 kPa	Electric System	
Exhaust Pipe Size	N/A	Electrical System Voltage	24V
Air Intake System		Battery	Maintenance-free
Max. static pressure after Radiator	0.125 kPa	Connecting Cables	Available
Maximum Intake Air Restriction		Thermal Data	
. With Clean Filter Element	2.16 kPa	Radiated Heat to Ambient	42-46
. With Dirty Filter Element	6.23 kPa	kW Heat Rejection to Coolant	197-
		219 kW	
		Heat Rejection to Exhaust	413-458 kW

Alternator

General Data	
Power Factor	Cos φ = 0.8
Excitation	Shunt / Brushless

Insulation Class	H
Bearing	Single
Altitude	≤ 1000 m

60Hz/1800R.P.M

Ratings

Brand	Alternator	Number of wires	AVR Model	PH	Voltage (V)	Prime Power	Standby Power
						kW/kVA	kW/kVA
Leroy-Somer	LSA47.2M7	12	R250	3	380/220	450/562	500/625
Stamford	HCI 544D		AS440			500/625	538/673
Tide	FPA35-4002		KR440			440/550	484/605
Leroy-Somer	LSA47.2M7	12	R250	3	208/120	488/610	534/668
Stamford	HCI 544C		AS440			420/525	455/569
Tide	FPA31-3609		SX440			432/540	474/2923
Leroy-Somer	LSA47.2S5	12	R250	3	220/127	425/531	468/585
Stamford	HCI 544C		AS440			440/550	480/600
Tide	FPA31-3609		SX440			432/540	474/2923
Leroy-Somer	LSA47.2S5		R250			440/550	484/605
Stamford	HCI 544C	12	AS440	3	230/132	465/581	505/631
Tide	FPA31-3609		SX440			432/540	474/2923
Leroy-Somer	LSA47.2S5		R250			456/570	200/625
Stamford	HCI 544C	12	AS440	3	480/277	475/594	515/644



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

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, 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

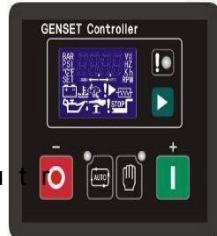
D : 800x600x1400

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