

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
FC188X-K	DP086TA	LSA46.2M3 UCI 274G FPA27-1407	380/220	3	150/188	166/208	284.9
		LSA 46.2 M3 UCI 274G FPA27-1286	208/120	3	150/188	166/208	520.5
		LSA44.2L12 UCI 274F FPA27-1286	220/127	3	150/188	166/208	492.1
		LSA44.2L12 UCI 274F FPA27-1286	230/132	3	150/188	166/208	470.7
		LSA44.3L10 UCI 274F FPA27-1286	480/277	3	150/188	166/208	225.5

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.

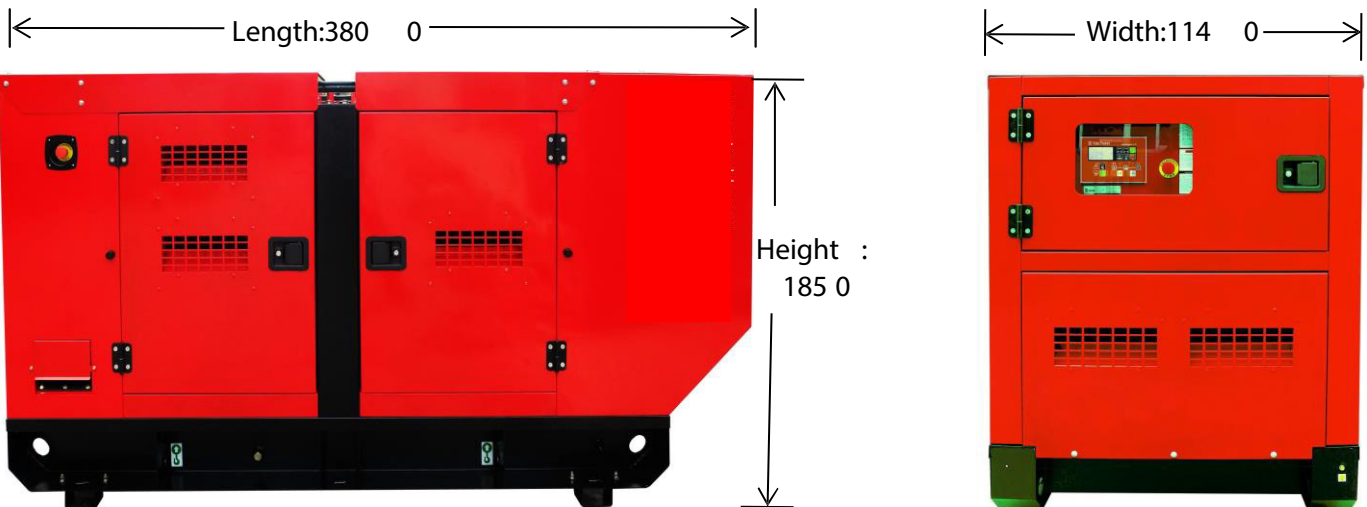
Prime Power:

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): 2450

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 ● 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 ① ② ○ Automatic fuel top up system ①
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 ①
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 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.)	15.5-12 Litres
Engine Model	DP086TA	Lubrication Method	Fully forced pressure feed type
Engine Type	4 cycle, in-line	Oil Pump	Gear Type Driven by Crank-shaft Gear
Engine Speed	1800 r.p.m	Maximum oil temperature	120°C
Prime Power	168kW	Fuel System	
Standby Power	187kW	Type Injection System	Direct Injection
Governor Type	Electronic	Fuel feed pump Capacity	175 liters / hr
Aspiration	Turbo charged	Fuel Consumption at 100% Standby Power	49.6 Litres/hour
Displacement	8.071 L	Fuel Consumption at 100% Prime Power	41.3 Litres/hour
Bore * Stroke	111mm x 139mm	Fuel Consumption at 75% Prime Power	30.3 Litres/hour
NO. of Cylinders	6	Fuel Consumption at 50% Prime Power	21.0 Litres/hour
Compression Ratio	16.7:1	Fuel Consumption at 25% Prime Power	11.5 Litres/hour
Intake Air Flow	20.19 m ³ /min	Fuel Tank Capacity	8 hours
Rotation	Counter clockwise viewed from flywheel	Cooling System	
Mean Piston Speed	8.34 m/s	Coolant Capacity- Engine Only	14 Litres
Noise Level @3m	67-72 dBA	Coolant Capacity - with Radiator	44 Litres
		Standard Thermostat (Modulating) Range	71-85°C
		Maximum for Standby and Prime	103°C
		Coolant Flow Rate	166 liters / min
Exhaust System		Electric System	
Exhaust Gas Flow	40.9 m ³ /min	Electrical System Voltage	24V
Exhaust Gas Temperature	543°C	Battery	Maintenance-free
Maximum Back Pressure	5.9 kPa	Connecting Cables	Available
Exhaust Pipe Size	N/A	Thermal Data	
Air Intake System		Radiated Heat to Ambient	14.8-16.4 kW
Max. static pressure after Radiator	0.125 kPa	Heat Rejection to Coolant	63.3-70.4 kW
Maximum Intake Air Restriction		Heat Rejection to Exhaust	145.5-162 kW
. With Clean Filter Element	2.16 kPa		
. With Dirty Filter Element	6.23 kPa		

Alternator

General Data		60Hz/1800R.P.M	
Power Factor	Cos ϕ = 0.8	Insulation Class	H
Excitation	Shunt / Brushless	Bearing	Single
		Altitude	≤ 1000 m

Ratings

Brand	Alternator	Number of wires	AVR Model	PH	Voltage (V)	Prime Power	Standby Power
						kW/kVA	kW/kVA
Leroy-Somer	LSA46.2M3	12	R250	3	380/220	154/192	169/211
Stamford	UCI 274G		160/200			170/212.5	
Tide	FPA27-1407		155/194			170/213	
Leroy-Somer	LSA 46.2 M3	12	R250	3	208/120	164/205	180/225
Stamford	UCI 274G		164/205			174.8/218.5	
Tide	FPA27-1286		155/194			170/213	
Leroy-Somer	LSA44.2L12	12	R250	3	220/127	152/190	167/209
Stamford	UCI 274F		152/190			165/206	
Tide	FPA27-1286		155/194			170/213	
Leroy-Somer	LSA44.2L12	12	R250	3	230/132	158/198	174/217
Stamford	UCI 274F		152/190			165/206	
Tide	FPA27-1286		155/194			170/213	
Leroy-Somer	LSA44.3L10	12	R250	3	480/277	150/188	165/206
Stamford	UCI 274F		165/206			175/218.8	
Tide	FPA27-1286		155/194			170/213	

ControlSystem



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+O	MCCB+O
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 TIDE POWER 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	Breakey 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