

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
FC11X-P	403D-11G	LSA40VS2 PI 044G FPA16-1083	240 (220-240)	1	9/11	10/12	45.8
		LSA40VS2 PI044E FPA16-881	380/220	3	9/11	10/12	17.1
		LSA40VS1 PI044E FPA16-881	208/120	3	9/11	10/12	31.2
		LSA40VS1 PI044E FPA16-881	220/127	3	9/11	10/12	29.5
		LSA40VS1 PI044E FPA16-881	230/132	3	9/11	10/12	28.2
		LSA40VS1 PI044E FPA16-881	480/277	3	9/11	10/12	13.5

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.

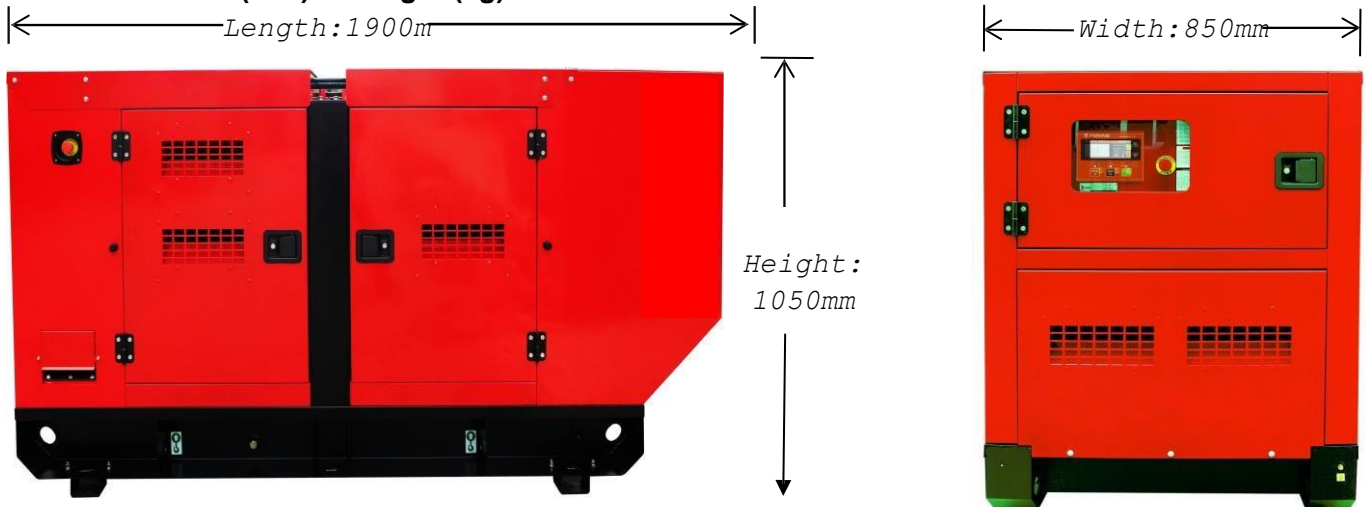
Prime Power:

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) : 580

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
Control System	<ul style="list-style-type: none"> ● Comap Nano Plus for 4 cylinders engine ● Comap IntelliLite AMF25 for 6 cylinders 	<ul style="list-style-type: none"> ○ device ○ Panel lighting
Silent / Base	<ul style="list-style-type: none"> ● or 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 	<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"> ● canopy ● 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

Manufacture	Perkins
Engine model	403D-11G
Engine type	4 stroke, Vertical in-line, 3-cylinder
Engine speed	1800 r.p.m
Prime power	10 kW
Standby power	11 kW
Governor type	Mechanical
Air intake way	Naturally aspirated
Displacement	1.131 L
Cylinder bore * stroke	77mm x 81mm
NO. of cylinders	3
Compression ratio	23:1
Brake mean effective pressure	TBA
Mean piston speed	N/A
Combustion air flow	0.9 m ³ /min
Noise level @7m	67 dBA

Exhaust system

Exhaust gas flow	2.21 m ³ /min
Exhaust gas temperature	437 - 515°C
Maximum back pressure	10.2 kPa
Exhaust outlet size	34 mm (horizontal)/40mm (vertical)

Air intake system

Maximum air intake restriction	
- Clean filter	3.0 kPa
- Dirty filter	6.4 kPa
- Air filter type	Dry

Lubrication system

Maximum sump capacity	4.4 Litre
Total lubrication system capacity	4.9 Litre
Normal oil temperature	125°C
Oil flow at rated speed	6.6 Litres/min

Fuel system

Type of injection	Direct
injection Fuel lift pump-flow/hour	63
Litres/hou Fuel consumption at 100% standby power	3.6
Litres/hou Fuel consumption at 100% prime power	3.0
Litres/hou Fuel consumption at 75% prime power	2.3
Litres/hou Fuel consumption at 50% prime power	1.7
Litres/hour Fuel tank capacity	

8-12 hours Cooling system

Total system capacity	
- With radiator	5.2 Litres
- Without radiator	1.9 Litre
Thermostat operation range	75-87 °C
Maximum top tank temperature	112°C

Electric system

Electrical system voltage	12V
Battery	Maintenance-free
Connecting cables	Available

Energy balance

Energy to coolant and lubricating oil	10.2-12.1
kW Energy to exhaust	8.9-
10.8 kW	
Energy to radiation	2.6-3.1 kW

Alternator

60Hz/1800R.P.M

General data

Power factor	Cos φ = 0.8
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Excitation	Shunt / Brushless
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Insulation class	H
Bearing	Single

Altitude	≤ 1000 m
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Ratings

Brand	Alternator	Number of wires	AVR Model	PH	Voltage (V)	Prime Power	Standby Power
						kW/kVA	kW/kVA
Leroy-Somer Stamford Tide	LSA40VS2 PI 044G FPA16-1083	4	R220 AS480 SX460	1	240 (220-240)	9.2/11.5 10.1/12.6 10.4/13	10.2/12.7 11/13.8 11.4/14.3
Leroy-Somer Stamford	LSA40VS2 PI044E	12	R220 AS480	3	380/220	10/12.5 10/12.5	11.2/14 10.9/13.6
Tide	FPA16-881		SX460			9.5/11.9	10.5/13
Leroy-Somer Stamford Tide	LSA40VS1 PI044E FPA16-881	12	R220 AS480 SX460	3	208/120	8.1/11 8.8/11 10.6/13.25	9.6/12 9.7/12.1 11.4/14.25
Leroy-Somer Stamford	LSA40VS1 PI044E	12	R220 AS480	3	220/127	9.2/11.5 9.4/11.8	10.4/13 10.3/12.9
Tide	FPA16-881		SX460			10.6/13.25	11.4/14.25

Leroy-Somer	LSA40VS1		R220			9.6/12	10.8/13.5
Stamford	PI044E	12	AS480	3	230/132	9.7/12.1	10.6/13.3
Tide	FPA16-881		SX460			10.6/13.25	11.4/14.25
Leroy-Somer	LSA40VS1		R220			10/12.5	11.2/14
Stamford	PI044E	12	AS480	3	480/277	10/12.5	11/13.8
Tide	FPA16-881		SX460			10.6/13.25	11.4/14.25



Control System



Comap Nano Plus

Comap IntelliLite

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, 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 (AMF25 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
80	x		x	B
100		A		B
125	x		B	B
160		B		B
200	x		B	x
250		C		B
300	x		x	x
315	x		C	x
400		C		C
630		C		D
800		D		D
1000		D		D
1250		D		D
1600		D		E
2000		E		E
2500		E		E
3200		E	x	E

Dimensions : mm

A : 400x200x500

B : 500x300x650

C : 600x400x1200

D : 800x600x1400

E : 1000x800x1600

Controller AMF25

StandardParameters



AMF 25

AUTOMATIC MAINS FAILURE START CONTROLLER WITH SUPPORT FOR EFI ENGINES

- 3 configurable analog inputs
- Magnetic pickup input
- D+ preexcitation terminal
- 7 binary inputs / 7 binary outputs
- Automatic and manual GCB and MCB control
- CAN with J1939 support
- RTC event and performance log
- Dual AMF/Mutual stand-by system

WarningandShutdownAlarms

- High engine temperature
- Emergency stop
- High/low battery voltage
- Aux. shutdown alarm
- Aux. shutdown alarm
- Aux. Warning