

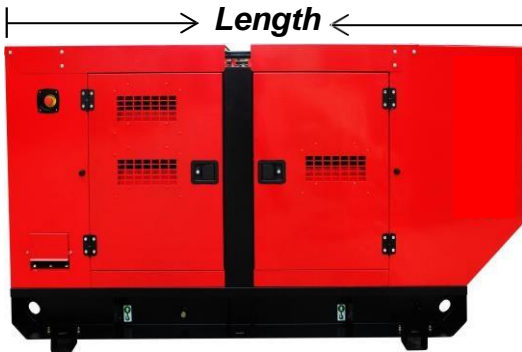


PGKT22

Engine model	ZN490B
Alternator model	FPA18-208
Control panel	Comap AMF20

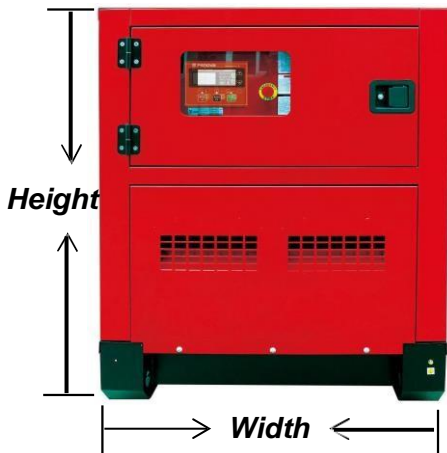
General Characteristics

Frequency (Hz)	60
Voltage (V)	220/127



Power

Voltage (V)	PRP		ESP		Rated Current (A)
	kWe	kVA	kWe	kVA	
208/120	20	25	22	27.5	69.4
220/127	20	25	22	27.5	65.6
230/132	20	25	22	27.5	62.7



Overall Dimensions & Weight

Length (mm)	2250
Width (mm)	1000
Height (mm)	1200
Dry weight (kg)	1100
Base Fuel Tank Capacity (L)	55
Noise level @7m dB(A)	72

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.

PRP

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.

ESP

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.

Standard and optional accessories

System	Standard ●	Optional ○
<i>Air Intake System</i>	<ul style="list-style-type: none"> • Standard air filter • Air filter overload alarm 	<ul style="list-style-type: none"> ○ Air prefilter ○ Heavy air filter
<i>Cooling System</i>	<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
<i>Exhaust System</i>	<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
<i>Fuel System</i>	<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 ①② ○ Automatic fuel top up system ①
<i>Lubrication System</i>	<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
<i>Alternator and Electric Switch</i>	<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
<i>Control System</i>	<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
<i>Silent / Base</i>	<ul style="list-style-type: none"> • 67-72 db(A) @ 7 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
<i>Start / Charge</i>	<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 Characteristics

Engine specifications

Engine brand	China
Engine model	ZN490B
Engine type	4 cycle, in-line, Water cooled
Engine speed (rpm)	1800
Rated output (kW)	30
Governor type	Mechanical
Aspiration	Naturally aspirated
Displacement (L)	3.26
Bore (mm) x Stroke (mm)	95 x115
Compression ratio	19.0:1
Number of cylinders	4
Mean piston speed (m/s)	8.56
Exhaust gas temperature (°C)	≤500
Exhaust gas flow (m ³ /min)	6.8
Cooling system capacity (engine only) (L)	6.5
Thermostat operation range (°C)	78-85
Maximum top tank temperature (°C)	96

Lubrication System

Total lubrication system capacity (L)	13
Oil consumption (g/kW.h)	≤2.04
Max continuous oil temperature (°C)	110
Type injection system	Direct injection
Fuel consumption 110% load (L/hr)	7.2
Fuel consumption 100% load (L/hr)	6.7
Fuel consumption 75% (L/h)	5.6
Fuel consumption 50% (L/h)	3.5
Fuel consumption 25% (L/h)	2.2
Fuel tank capacity	8 hours
Starting method	Electric motor start
Electrical system voltage (V)	12
Battery	Maintenance-free
Connecting cables	Available

Alternator Characteristics

General Data

Alternator brand	Tide	Insulation class	H
Alternator model	FPA18-208	Protection class	IP23
Number of Phase	3	Number of wires	12
Power factor (Cos Phi)	0.8	AVR regulation	Yes
Excitation	Brushless	Voltage regulation (%)	± 0.5
Bearing	Single	Overspeed (rpm)	2250
Speed (rpm)	1800	Altitude (m)	≤ 1000

Control System



		Comap Nano AMF	Comap IntelliLite AMF20	Comap IG/IC-NT
Viewable parameter	Phase voltage	3	3	3
	Instrument	•	•	•
	Active power	x	•	•
	Reactive power	x	•	•
	Apparent power	x	•	•
Generator protection	Power factor	x	•	•
	Electric energy metering	x	•	•
	Abnormal voltage	•••		
	Over-current warning	x	•	•
	Over current protection	x	•	•
	Over Frequency protection	•	•	•
	Short circuit protection	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	x	○	○
	Communication port	x	○	○
	CAN	•	○	•
	Start/Stop time control	x	x	•
	Maintenance tips	x	x	•
Fault record	x	x	•	
Multi-language function	x	•	•	
Remark:	• Standard	○ Optional	xNA	

(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 AMF25
- 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
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