

DIESEL GENERATOR DATA SHEET

Power By Perkins

Model:AP22



Output Ratings

Generator set model	Voltage	Hz	Phase	P.F.	Prime Power		Standby Power	
	(V)				KVA	KW	KVA	KW
AP22	230/400	50	3	0.8	20	16	22	18

•220/380V, 240/415V, 254/440V is available

Dimension & weight

Generator set model	Type	L*W*H(mm)	Weight(kg)
AP22	Open	1510*750*1120	500
	Silent	2000*1000*1350	950

Other datas

Circuit Breaker capacity (A)	63
Battery brand	Varta
Base Fuel Tank Capacity(L)	43

Notes:

- Standby power: Continuous running at variable load for duration of an emergency. No overload is permitted on these ratings. In accordance with ISO 3046 .
- Prime power: Continuous running at variable load for unlimited periods with 10% overload available for 1 hour in any 12 hour period. In accordance with ISO 8528,ISO 3046.
- Standard reference conditions 25°C (77°F) Air Inlet Temp, 100m(328 ft) A.S.L. 30% relative humidity.

Warranty

- The standard warranty period: One year after ex-work or 1000 operation hours whichever come first shall apply.
- Consumable parts(air filter, fuel filter, lube oil filter) , All failures and damages due to the mal-operation, neglect of maintenance and operation not according to the operation manual, are out of the scope of warranty.

Standard Configuration

- Engine include air,fuel,oil filters, starting motor and charge alternator etc.
- Brushless AC alternator,single bearing, flange connection, w/AVR
- Radiator with engine driven fan mounted on skid
- Channel steel base frame, <550KW base 8hrs mounted fuel tank as standard
- Anti-vibration pads between engine/alternator and base frame
- Circuit breaker 3P as standard, 4P optional
- Auto control panel
- Start battery w/ connecting cable and floating battery charger
- Flexible pipe, exhaust elbow, industrial silencer etc.
- Standard tools kit
- Electric drawing, test report ,operation & maintaince manual of generator etc.
- Optional soundproof/Container canopy, ATS cabinet, remote control panel, synchronization panel, movable trailers, heat exchanger, remote horizontal water tank system, external fuel tank, etc



Manufacturer reserves the right to make changes in model, technical specifications, color, equipment and accessories without prior notice.

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Engine

GENERAL ENGINE DATA

Engine manufacture	Perkins Engines Company Limited	
Engine brand	Perkins	
Engine model	404D-22G	
Engine speed (rpm)	1500	
	Prime power	Standby power
Gross engine power (kWb)	18.7	20.6
Typical Genset electrical output 0.8pf 25°C (100 kPa) (KW)	16	17.7
Cylinders	4-cylinder, vertical in line	
Cycle	4 stroke	
Induction system	Naturally Aspirated	
Compression ratio	23.3:1	
Bore * Stroke (mm)	84*100	
Cubic capacity (Litre)	2.216	

FUEL SYSTEM

Type of injection	direct	
Governor type	Mechanical	
Fuel Consumption (litre/hour)		
	110%	6.1
	100%	5.3
	75%	4
	50%	2.9

COOLING SYSTEM

Total system capacity(litre)		
	with radiator	7
	without radiator	3.6
Max. top tank temperature (°C)	112	
Thermostat operating range (°C)	82-95	

LUBRICATION SYSTEM

Min. oil capacity in sump(litre)	8.9	
Max. oil capacity in sump(litre)	10.6	
Min. oil pressure(kPa)	120	
Oil temperature (in sump) normal continuous operation(°C)	125	

INDUCTION SYSTEM

Maximum air intake restriction of engine (kPa)		
	Clean filter	3
	Dirty filter	6.4
Combustion air flow(standby/prime power) (m ³ /min)	1.45	

EXHAUST SYSTEM

Back pressure for total system (kPa)	10.2	
Exhaust gas flow (max)(m ³ /min)	3.94/3.64	
Exhaust gas temp. after turbo(standby/prime power)(°C)	505/445	

ELECTRICAL SYSTEM

Alternator voltage (volts)	12	
Alternator output (amps)	65	
Stator motor type (volts)	12	
Starter motor power (kw)	2	

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ALTERNATOR

Alternator manufacturer	Cummins Generator Technologies(China) Co. Ltd
Alternator brand	Stamford
Alternator model	PI144D
Control system	SELF EXCITED
A.V.R.	Included
Voltage regulation	±1.0%
Insulation system	Class H
Protection	IP23
Rated power factor	0.8
Winding pitch	Two thirds
Winding leads	12
Frequency (Hz)	50
Voltage (V)	400
Phase	3
Output ratings (kVA/kW)	
-----Cont.H-40°C	20/16
-----Standby-27°C	22/17.6
THF	<2%
TIF	<50
Max. overspeed (Rev/Min)	2250
Bearing	Single

CONTROL SYSTEM



The **DEEPSEA DSE 6120** is an Auto Mains (Utility) Failure Control Module developed to provide a wide range of operating and monitoring features for single diesel and gas gen-sets.

DSE7320, ComAp AMF25 etc. for option.

Protection function:

- Low oil Pressure
- High water temperature
- High voltage and low voltage
- Over current
- Overspeed
- Volt adjuster and frequency adjuster.
- Emergency stop
- Low fuel alarm and shutdown
- Low coolant alarm and shutdown

Key Functions:

- Multiple display languages
- Data logging facility
- Fully configurable via PC using USB communication
- Front panel configuration
- 3 phase generator sensing
- 3 phase mains (utility) sensing
- Generator/load power monitoring (kW, kV A, kV Ar, pf)
- Accumulated power monitoring (kW h, kVA h, kVAr h)
- Generator/load current monitoring and protection
- Generator overload protection (kW)
- Breaker control via fascia buttons
- Fuel and start outputs, configurable when using CAN
- 4 configurable DC outputs
- 4 configurable analogue/digital inputs
- Support for 0 to10 V & 4 to 20 mA oil pressure sensors
- 6 configurable digital inputs
- Configurable staged loading outputs
- CAN, MPU and alternator speed sensing in one variant
- 3 engine maintenance alarms
- Engine hours counter
- Engine pre-heat
- Engine run-time scheduler
- Engine idle control for starting & stopping
- Fuel pump control
- Battery voltage monitoring
- Start on low battery voltage
- Configurable remote start input
- 1 alternative configuration
- Comprehensive warning, electrical trip or shutdown protection.
- LCD and LED alarm indication

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SILENT CANOPY



- ① Durable stainless steel hinges
- ② Durable stainless steel hinges
- ③ Strong base fuel tank
- ④ High performance exhaust silencer
- ⑤ Deepsea control system
- ⑥ Emergency stop
- ⑦ High quality 3P Circuit breaker and terminal output
- ⑧ Fresh air inlet cooling system

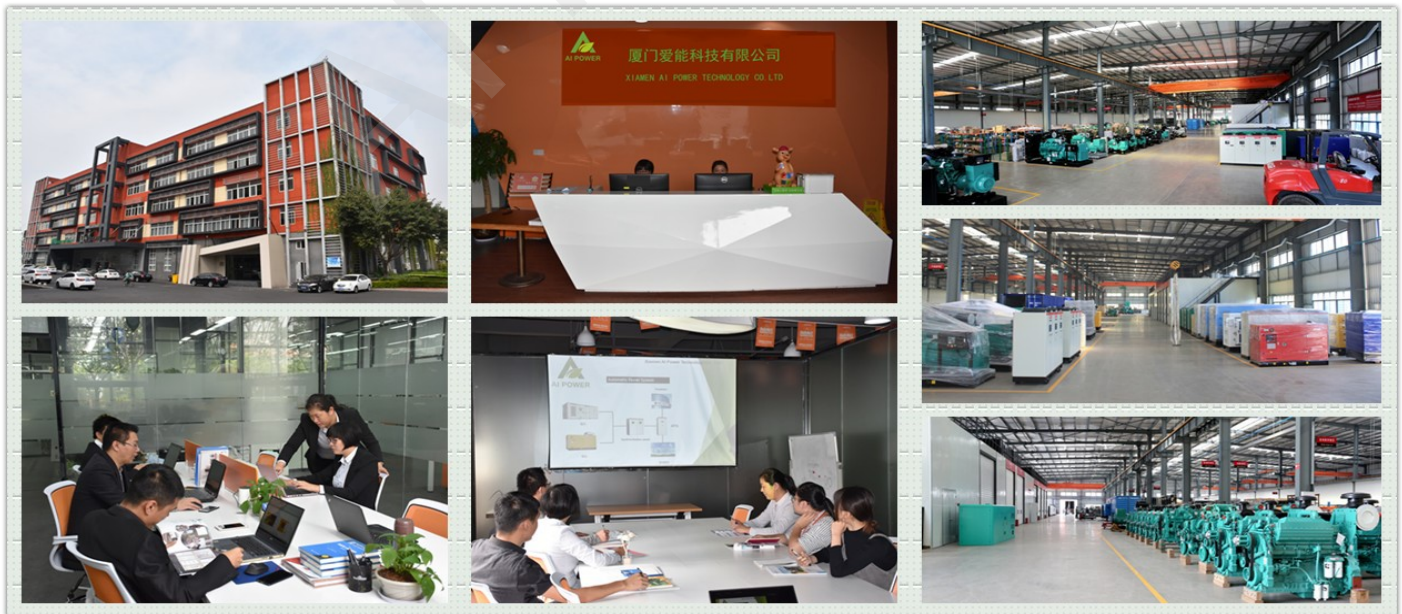


- ① air inlet cooling system
- ② stainless door lock
- ③ fuel cap lock
- ④ tow holes
- ⑤ engine
- ⑥ radiator
- ⑦ insulation and soundproof materials
- ⑧ maintenance door

Performance Features:

- More than 2mm thick steel to make the canopy.
- High quality paint materials and strict powder paint processing.
- large-scale impedance combined type silencer effectively reduce noise of the generator.
- Stainless steel door locks and hinges and 180° revolvable and disassemble door for easy maintenance.
- High quality soundproof and insulation materials could efficiently reduce noise.
- Transparent viewing window make the control panel clear at a glance.
- Lifting earis mounted in the base frame for easy pull.
- From 10kva to 700kva we use normal silent canopy, more than 700kva we are using containerized canopy.
- ISO standard 20', 40' and 40HQ sea container canopy for options.
- Standard sea container canopy is easier for shipping.

AI POWER COMPANY SHOW



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