

**AKSA Power Generation** has been producing industrial generator sets with an innovative compact design and excellence in quality for over 30 years. AKSA has been providing reliable power through three main production plants and over 15 branch offices worldwide.



**General Characteristics**

Model Name	<b>AP327-6</b>	Frequency / PF	<b>60Hz, 1800 rpm, 0.8pf</b>
Engine Make & Model	<b>Perkins 1506A-E88TAG3</b>	Alternator Make	<b>Stamford</b>
Control Panel Model	<b>DSE 7320</b>	Base Frame / Enclosure	<b>AKSA MS60</b>

**Genset Rating – 60Hz, 1800rpm, 0.8pf**

Engine	Alternator	Voltage	Standby Power	Prime Power	Standby Current
1506A-E88TAG3	UCDI274J (Wnd-311)	480 / 277V	327kVA	298kVA	393A
	UCDI274J (Wnd-14)	380 / 222V	327kVA	298kVA	496A
	UCDI274K (Wnd-311)	220 / 127V	327kVA	298kVA	858A
	HCI444D (Wnd-311)	208 / 120V	327kVA	298kVA	907A

Stand-by Power (Maximum): Power available at variable load in the event of main power network failure. No over load is permitted.  
 Prime Power: Power available at variable load in lieu of a main power network. Overload of 10% is permitted for 1 hour in every 12 hours of operation.  
 The above ratings represent the engine performance capabilities to conditions specified in accordance with ISO 8528/5 & ISO3046.  
**Derating may be required for conditions outside of the test conditions.**

**Codes & Standards**

The Generator set is designed and manufactured in a facility certified to **ISO9001** standards.

The Generator set is designed and manufactured in a facility certified to **ISO14001:2015** standards.

**AKSA Power Generation** provides **single source responsibility** for the generator set & accessories.

The generator set, with its components, are **prototype tested** and **production tested**



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## Engine Data

Manufacturer	Perkins
Model	1506A-E88TAG3
Displacement & Cylinders	8.8 L / 6 Cylinders
Engine Speed	1800rpm
Engine Standby Power	287 Kw
Engine Prime Power	254 Kw
Aspiration	Air to Air Aftercooled, Turbocharged
Compression Ratio	16.1 : 1
Bore / Stroke	112 mm / 149 mm
Break Mean Effective Pressure	2250 kPa
Engine Coolant Flow	190 l/min
Combustion Air Flow	19.8 m <sup>3</sup> /min
Exhaust Gas Flow	48.9 m <sup>3</sup> /min
Exhaust Gas Temperature	496 °C
Overall Thermal Efficiency	42 %
Speed Variation at Constant Load	± 0.25 %

## Fuel System

Injection System	Direct
Governor Type	Electronic
Lift Pump Type	Gear
Fuel Filter Spacing	4 microns

## Fuel Consumption

Standby Power (110%)	69.8 L/h
Prime Power (100%)	63.1 L/h
Prime Power (75%)	47.5 L/h
Prime Power (50%)	33.1 L/h

## Electric System

Engine Cranking Motor	24V
Engine Battery Charge System	Negative Ground
Battery Qty, Rating, CCA	2 x 80Ah

## Cooling System

Radiator Face Area	0.49 m <sup>2</sup>
Fan Number of Plates/Material	9 / Plastic
Total System Capacity	29.6 L
Max Top Tank Temperature	107 °C
Thermostat Range	87 – 98 °C

## Exhaust System

Maximum Back Pressure	10 kPa
Exhaust Outlet Size	TBA

## Lubrication System

Total System Capacity	41 L
Minimum Capacity	36 L
Max Oil Temp	120 °C
Oil Pressure – relief valve opens	662 kPa
Oil Consumption at full load as a % of fuel consumption	0.1 %

## Energy Balance

Energy in fuel	688 kW
Energy in power output – gross	297 kW
Energy to cooling fan	13 kW
Energy to coolant and oil	120 kW
Energy to exhaust	204 kW

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**Alternator Data**

Manufacturer	Stamford
Standards	BS EN 60034
Control System	Self Excited
A.V.R.	AS440
Voltage Regulation	± 1 %
Insulation System	Class H
Protection	IP23
Rated Power Factor	0.8
Stator Winding	Double Layer Concentric
Winding Pitch	Two Thirds
Winding Leads	12
Telephone Interference	THF < 2 %
Waveform Distortion	No Load < 1.5 %
Maximum Over speed	2250 rev/min

**Controller Data**

Manufacturer	DSE
Model	7320
Type	Auto Mains Failure Control

**Controller Features & Benefits**

- Microprocessor controlled
- License free PC Software
- IP65 rating offers increased resistance to water ingress
- Modules can be integrated to building management systems
- Real time clock provides accurate event log
- Four line back-lit LCD text display
- Five key menu navigation
- Front panel editing with PIN protection
- Support up to three remote display modules
- Configurable timers and alarms

**Battery Charger & Electrical System Data**

Manufacturer	AKSA
Model	SmartGen BAC06A
Input Voltage	100V ~ 250V AC
Output Voltage / Current	27,6V DC / 3A

- Multiple date and timer scheduler
- Integral PLC editor
- 'Protections disabled' feature
- kW & kVAr protection
- Reverse power (kW & kVAr) protection
- Power monitoring (kWh, kVAr, kVAh, kVArh)

**Jacket Water Heater Data**

Manufacturer	AKSA
Model	HTR3000
Input Voltage	Based on Gen Voltage
Power	3000W

- Load switching (load shedding and dummy load outputs)
- Unbalanced load protection
- Independent Earth Fault trip
- Fully configurable via DSE Configuration Suite PC Software
- SCADA monitoring via DSE Configuration Suite PC Software

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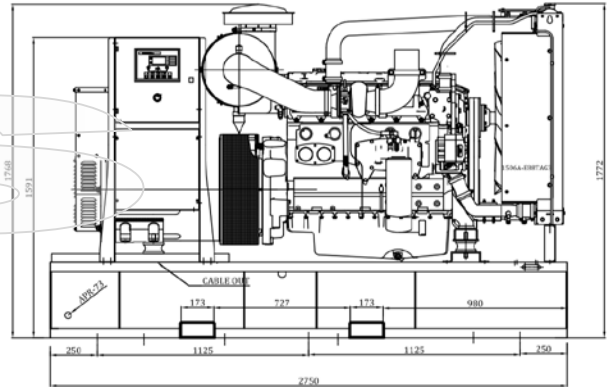
**Enclosure Features**



- ✓ Heavy Duty Steel Structure
- ✓ E-Stop on Enclosure
- ✓ Control Panel Eliminated from Engine Vibrations
- ✓ Control Panel Window
- ✓ Plastic Covered Corrosion Resistant Locks & Hinges
- ✓ Internally Mounted Exhaust System with Rain Cap
- ✓ Coolant Fill Cap
- ✓ Top Lifting Feature
- ✓ Base Fuel Tank
- ✓ Easy Access for Maintenance
- ✓ Sound Absorb High Density Foam

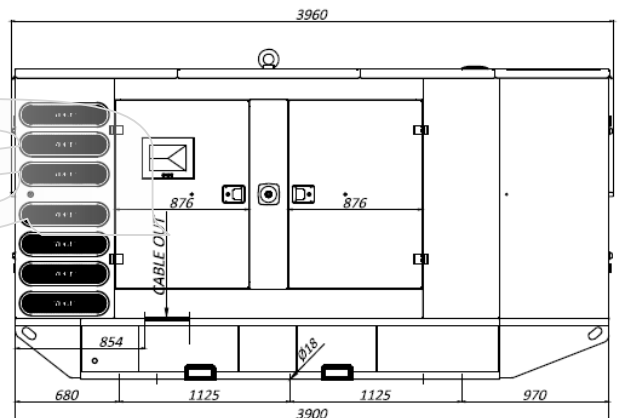
**Open Skid Gen-Set Dimensions**

Length	2750 mm
Width	1300 mm
Height	1777 mm
Dry Weight	2165 kg
Tank Capacity	470 L



**Enclosed Gen-Set Dimensions**

Length	3960 mm
Width	1356 mm
Height	2167 mm
Dry Weight	2900 kg
Tank Capacity	470 L
Sound Pressure @ 7 meters	77 dB(A)



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**Standard Features & Accessories**

- ✓ Heavy Duty Steel Base Frame
- ✓ Integral Fuel Tank
- ✓ Fuel Drain Plug
- ✓ Control Panel Window
- ✓ Engine Jacket Water Heater
- ✓ Battery and Battery Rack
- ✓ Battery Charger
- ✓ Anti Vibration Pads between Engine/Alternator & Base Frame
- ✓ Residential Grade Silencer Inside Enclosure
- ✓ Industrial Grade Silencer Set for Open Skid Sets
- ✓ Exhaust pipe rain cap and radiator fill cap
- ✓ Sound Absorb Foam for Enclosure
- ✓ Air Inlet & Outlet Rodent Guards
- ✓ Oil Drain Valve
- ✓ Coolant Drain Valve
- ✓ Flex Fuel Lines
- ✓ Air Filter Restriction Gauge
- ✓ Engine Manifold Cover
- ✓ Turbocharger Cover
- ✓ Protection Covers for Rotating Parts
- ✓ Exhaust Insulation Cover
- ✓ Control Panel Window
- ✓ Operations Manual
- ✓ 24 Months / 2000 hours Limited Standby Warranty

**Optional Accessories**

- Main Line CB (3 / 4 Poles)
- PMG
- Voltage Regulation  $\pm 0.5\%$  w/MX321 AVR
- Anti-condensation Heater
- Double Wall Base Fuel Tank
- Fuel Level Display & Alarm on Controller
- Low / High Fuel Alarms
- Fuel Water Separator Filter
- Auto Fuel Fill Control System
- Oil Temperature Display on Controller
- Manual Speed Adjust Rheostat
- Manual Voltage Adjust Rheostat
- Remote Annunciator Panel
- Remote Control & Monitoring Panel
- Advanced SMS Messaging
- Control Panel Heater
- Battery Disconnect Switch
- Battery Heater
- 10A Battery Charger
- Battery Charge Ammeter
- Tool Kit for Maintenance
- Automatic Transfer Panel (ATS) – Contactor Design
- Automatic Transfer Panel (ATS) – Changeover Design

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