

**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>AP220-6</b>	Frequency / PF	<b>60Hz, 1800 rpm, 0.8pf</b>
Engine Make & Model	<b>Perkins 1106A-70TAG3</b>	Alternator Make	<b>Stamford</b>
Control Panel Model	<b>DSE 6020</b>	Base Frame / Enclosure	<b>AKSA AK50</b>

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

Engine	Alternator	Voltage	Standby Power	Prime Power	Standby Current
1106A-70TAG2	UCI274F	480 / 277V	190kVA	170kVA	228A
	UCI274H	380 / 222V	190kVA	170kVA	288A
	UCI274G	220 / 127V	190kVA	170kVA	498A
	UCI274G	208 / 120V	190kVA	170kVA	527A

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**



**Engine Data**

Manufacturer Model	Perkins 1106A-70TAG3
Displacement & Cylinders	7.01 L / 6 Cylinders
Engine Speed	1800rpm
Engine Standby Power	191.7 Kw
Engine Prime Power	172.5 kW
Aspiration	Turbocharged & Air Charge Cooled
Compression Ratio	16 : 1
Bore / Stroke	105 mm / 135 mm
Break Mean Effective Pressure	1898.4 kPa
Engine Coolant Flow	170 l/min
Combustion Air Flow	16.37 m <sup>3</sup> /min
Exhaust Gas Flow	38.35 m <sup>3</sup> /min
Exhaust Gas Temperature	485 °C
Overall Thermal Efficiency	37.6 %
Speed Variation at Constant Load	± 0.25 %

**Fuel System**

Injector	Mechanical
Fuel Injection Pump	DP210G
Priming Pump Type	Manual
Max Fuel Flow	135 liters/min

**Fuel Consumption**

Standby Power (110%)	51.0 L/h
Prime Power (100%)	46.4 L/h
Prime Power (75%)	35.3 L/h
Prime Power (50%)	22.7 L/h

**Electric System**

Engine Cranking Motor	12V
Engine Battery Charge System	Negative Ground
Battery Qty, Rating, CCA	1 x 80Ah

**Cooling System**

Radiator Face Area	0.524 m <sup>2</sup>
Fan Number of Plates/Material	7 / Nylon
Total System Capacity	21 L
Max Top Tank Temperature	110 °C
Thermostat Range	82 – 93 °C

**Exhaust System**

Maximum Back Pressure	6 kPa
Exhaust Outlet Size	72 mm

**Lubrication System**

Total System Capacity	16.5 L
Minimum Capacity	12.4 L
Max Oil Temp	125 °C
Oil Pressure – relief valve opens	430 kPa
Oil Consumption at full load as a % of fuel consumption	0.1 %

**Energy Balance**

Energy in fuel	510.2 Kw
Energy in power output – gross	199.7 Kw
Energy to cooling fan	8 Kw
Energy to coolant and oil	88.3 Kw
Energy to exhaust	159.9 kW

**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

**Battery Charger & Electrical System Data**

Manufacturer	AKSA
Model	SmartGen BAC06A
Input Voltage	100V ~ 250V AC
Output Voltage / Current	13,8V DC / 6A

**Jacket Water Heater Data**

Manufacturer	AKSA
Model	HTR1000W 100-120F
Input Voltage	1 ph, Based on gen voltage
Power	1000W

**Controller Data**

Manufacturer	DSE
Model	6020
Type	Auto Mains Failure Control

**Controller Features & Benefits**

- Microprocessor controlled
- License free PC Software
- IP65 rating offers increased resistance to water ingress
- Front Panel Editing
- Event log
- Back-lit icon LCD display
- LED and LCD alarm indication
- Power save mode
- PC and front panel configuration
- Configurable timers and alarms
- Alternative configuration
- Three phase generator monitoring
- Current monitoring and protection
- Power monitoring (kW, kVA, kVAr)
- Reverse power (kW & kVAr) protection
- Three phase utility monitoring
- Test feature
- Battery voltage monitoring
- Hours counter
- Comprehensive warning or shutdown on fault condition

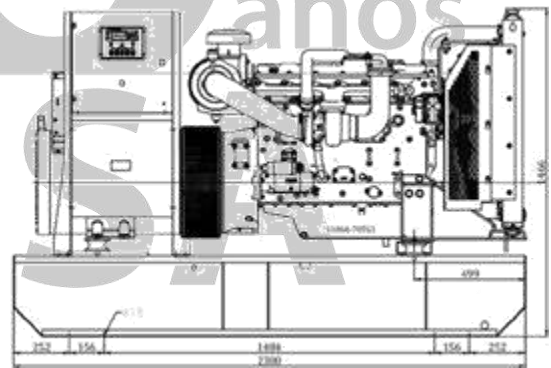
**Enclosure Features**

- ✓ 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
- ✓ Enclosure Top Lifting Hooks
- ✓ Base Fuel Tank
- ✓ Easy Access for Maintenance
- ✓ Sound Absorb High Density Foam



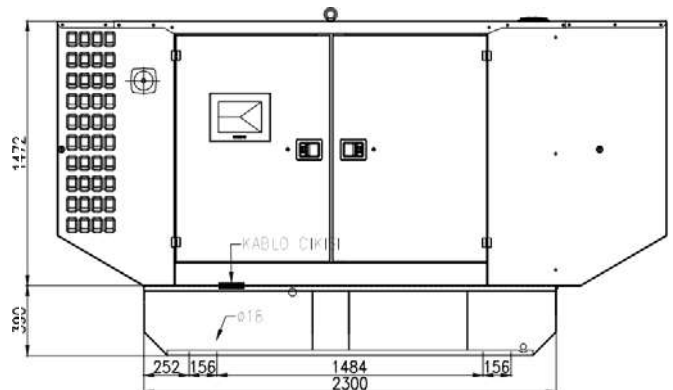
**Open Skid Gen-Set Dimensions**

Length	2300 mm
Width	1150 mm
Height	1466 mm
Dry Weight	1725 kg
Tank Capacity	340 L



**Enclosed Gen-Set Dimensions**

Length	3402 mm
Width	1160 mm
Height	1938 mm
Dry Weight	2050 kg
Tank Capacity	340 L
Sound Pressure @ 7 meters	76 dB(A)



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

**Standard Features & Accessories**

- ✓ Heavy Duty Steel Base Frame
- ✓ Integral Fuel Tank, Single Wall
- ✓ Fuel Drain Plug
- ✓ Control Panel Window
- ✓ Engine Jacket Water Heater
- ✓ Battery and Battery Rack
- ✓ Battery Charger
- ✓ Radiator fill cap on enclosure
- ✓ Anti Vibration Pads between Engine/Alternator & Base Frame
- ✓ Residential Grade Silencer Inside Enclosure
- ✓ Industrial Grade Silencer Set for Open Skid Sets
- ✓ 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
- Anti-condensation Heater
- Single wall fuel tank – 24hours capacity
- Double wall 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
- Power Plug Outlet Kit
- Automatic Transfer Panel (ATS) – Contactor Design
- Automatic Transfer Panel (ATS) – Changeover Design

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**SEDE PRINCIPAL:**

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