

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	AP170-6	Frequency / PF	60Hz, 1800 rpm, 0.8pf
Engine Make & Model	Perkins 1106A-70TG1	Alternator Make	Stamford
Control Panel Model	DSE 6020	Base Frame / Enclosure	AKSA AK50

Genset Rating – 60Hz, 1800rpm, 0.8pf

Engine	Alternator	Voltage	Standby Power	Prime Power	Standby Current
1106A-70TG1	UCI274E	480 / 277V	170kVA	154kVA	204A
	UCI274F	380 / 222V	170kVA	154kVA	258A
	UCI274E	220 / 127V	170kVA	154kVA	446A
	UCI274F	208 / 120V	170kVA	154kVA	471A

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	Perkins
Model	1106A-70TG1
Displacement & Cylinders	7.01 L / 6 Cylinders
Engine Speed	1800rpm
Engine Standby Power	148.4 Kw
Engine Prime Power	133.5 kW
Aspiration	Turbocharged
Compression Ratio	18.2 : 1
Bore / Stroke	105 mm / 135 mm
Break Mean Effective Pressure	1477.9 kPa
Engine Coolant Flow	170 l/min
Combustion Air Flow	11.48 m ³ /min
Exhaust Gas Flow	29.05 m ³ /min
Exhaust Gas Temperature	526 °C
Overall Thermal Efficiency	38.4 %
Speed Variation at Constant Load	± 0.75 %

Fuel System

Injector	Mechanical
Fuel Injection Pump	DP310
Priming Pump Type	Manual
Max Fuel Flow	135 liters/min

Fuel Consumption

Standby Power (110%)	38.8 L/h
Prime Power (100%)	35.2 L/h
Prime Power (75%)	26.0 L/h
Prime Power (50%)	17.5 L/h

Electric System

Engine Cranking Motor	12V
Engine Battery Charge System	Negative Ground
Battery Qty, Rating, CCA	1 x 60Ah

Cooling System

Radiator Face Area	0.464 m ²
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	110 °C
Oil Pressure – relief valve opens	460 kPa
Oil Consumption at full load as a % of fuel consumption	0.1 %

Energy Balance

Energy in fuel	368.8 Kw
Energy in power output – gross	155.8 Kw
Energy to cooling fan	7 Kw
Energy to coolant and oil	92 kW
Energy to exhaust	124.5 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

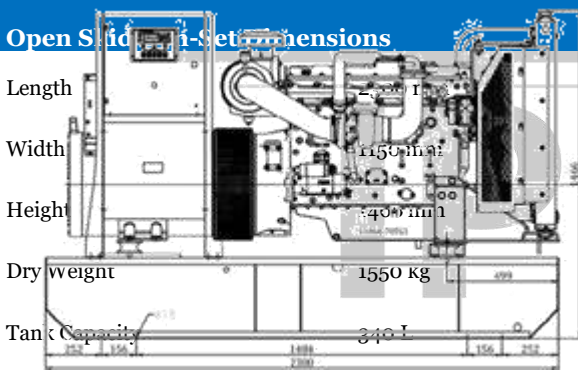
Comprehensive warning or shutdown on fault condition

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

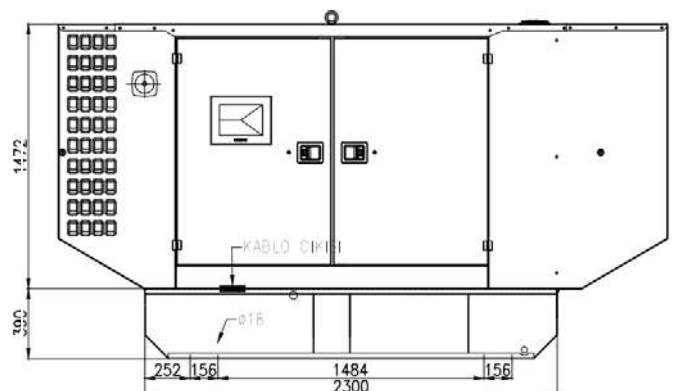


Open Skid Gen-Set Dimensions



Enclosed Gen-Set Dimensions

Length	3402 mm
Width	1160 mm
Height	1938 mm
Dry Weight	1850 kg
Tank Capacity	340 L
Sound Pressure @ 7 meters	74 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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