

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	APD100C-6	Frequency / PF	60Hz, 1800 rpm, 0.8pf
Engine Make & Model	Cummins 6BT5.9G2	Alternator Make	Stamford / Aksa
Control Panel Model	DSE 6120	Base Frame / Enclosure	AKSA ACP6A

Genset Rating – 60Hz, 1800rpm, 0.8pf

Engine	Stamford Alternator	Aksa Alternator	Voltage	Standby Power	Prime Power	Standby Current
6BT5.9G2	UCI274F	AK370	480 / 277V	100kVA	90kVA	120A
	UCI274G	AK370	220 / 127V	100kVA	90kVA	262A
	UCI274G	AK370	208 / 120V	100kVA	90kVA	277A

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	Cummins
Model	6BT5.9G2
Displacement & Cylinders	5.9L / 6 Cylinders
Engine Speed	1800rpm
Engine Standby Power	92 kW / 123 HP
Engine Prime Power	86 kW / 115 HP
Aspiration	Turbocharged
Compression Ratio	17.3 : 1
Bore / Stroke	102 mm / 130 mm
Governor Regulation	≤ 3%
Piston Speed	6 m/s
Friction Horsepower	12.7 kW
Engine Water Flow	2.0 litre/sec.
Intake Air Flow	108 litre/sec.
Exhaust Gas Flow	280 litre/sec.
Exhaust Gas Temperature	565 °C

Fuel System

Type of Injection	BYC A Direct Injection
Max Restriction @ Lift Pump	22 L/h
Max Allowable Head on Injector Return Line	17 L/h
Total Drain Flow	11 L/h

Fuel Consumption

Standby Power	33.6 L/h
Prime Power (100%)	29.7 L/h
Prime Power (75%)	22.2 L/h
Prime Power (50%)	15.6 L/h
Prime Power (25%)	9.4 L/h

Electric System

Engine Cranking Motor	24V
Engine Battery Charge System	40A, Negative Ground
Battery Qty, Rating, CCA	2 x 60Ah

Cooling System

Coolant Capacity	32,9 L
Max Coolant Friction Head External to Engine -1500rpm	28 kPa
Thermostat Range	82-95 °C
Min Pressure Cap	69 kPa
Max Top Tank Temperature	104 °C

Exhaust System

Max Back Pressure	10 kPa
Min Exhaust Pipe Size	75 mm
Manifold Insulation	Not Acceptable
Turbocharger Insulation	Not Acceptable

Air Intake System

Max Intake Air Restriction	6 kPa (Dirty Element) 4 kPa (Clean Element)
Min Dirt Holding Capacity	53 g/cfm
Max Temp Rise from Ambient to Inlet of Turbo	17 °C

Lubrication System

Max Oil Temperature	121 °C
Oil Capacity : High - Low	14.2 L – 12.3 L
Min Required Lube Capacity	16.4 L


Alternator Data

Manufacturer	Stamford / Aksa
Standards	BS EN 60034
Control System	Self Excited
A.V.R.	SX460
Voltage Regulation	± 1 %
Insulation System	Class H
Protection	IP21
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	27,6V DC / 3A

Jacket Water Heater Data

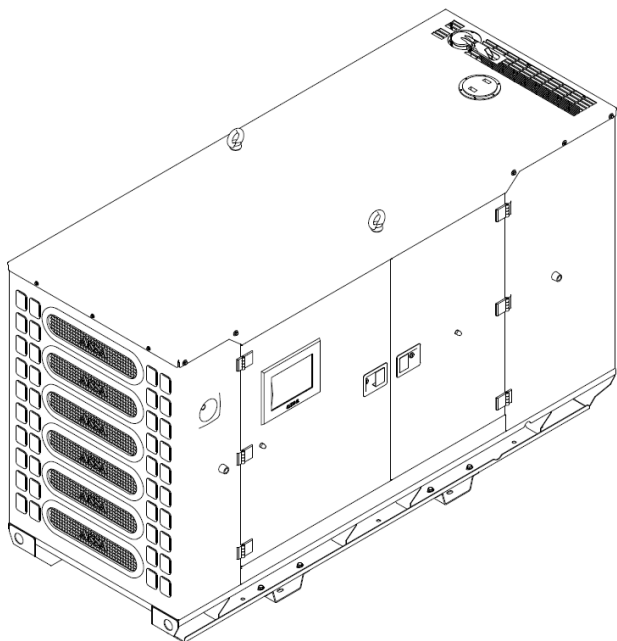
Manufacturer	AKSA
Model	HTR1000W 100-120F
Input Voltage	1 ph, Based on gen voltage
Power	1000W

Controller Data

Manufacturer	DSE
Model	6120
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

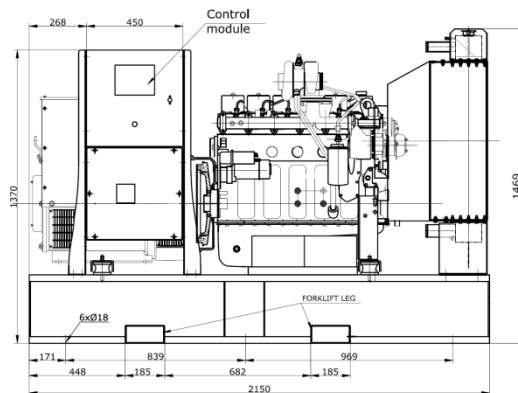


Enclosure Features

- ✓ 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
- ✓ Top Lifting Hooks
- ✓ Sound Absorb High Density Foam
- ✓ Enclosure DC Light
- ✓ Easy Access Doors for Maintenance

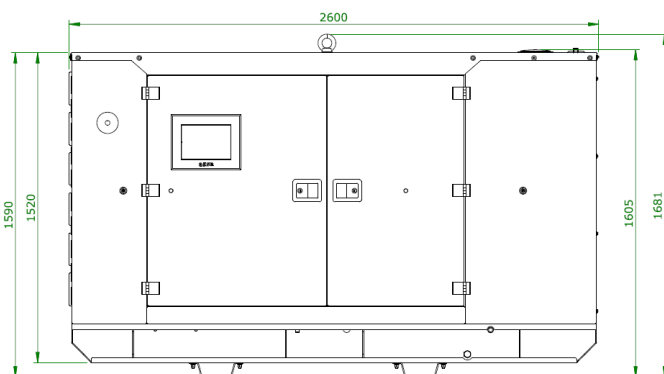
Open Skid Gen-Set Dimensions

Length	2150 mm
Width	1000 mm
Height	1469 mm
Dry Weight	1210 kg
Tank Capacity	155 L



Enclosed Gen-Set Dimensions

Length	2600 mm
Width	1058 mm
Height	1681 mm
Dry Weight	1560 kg
Tank Capacity	155 L
Sound Pressure @ 7 meters	TBA



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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
- ✓ 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
- ✓ 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
- Bulk fuel tank
- 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
- Automatic Transfer Panel (ATS)
- **Please consult with factory for more options.

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