

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	APD550C-6	Frequency / PF	60Hz, 1800 rpm, 0.8pf
Engine Make & Model	Cummins QSZ13-G3	Alternator Make	Stamford / Aksa
Control Panel Model	DSE 7320	Base Frame / Enclosure	AKSA MS70

Genset Rating – 60Hz, 1800rpm, 0.8pf

Engine	Stamford Alternator	Aksa Alternator	Voltage	Standby Power	Prime Power	Standby Current
	HCI544C	AK6371	480 / 277V	550kVA	500kVA	661A
QSZ13-G3	HCI544C	AK6371	220 / 127V	550kVA	500kVA	1443A
	HCI544C	AK6371	208 / 120V	550kVA	500kVA	1526A

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	Cummins
Model	QSZ13-G3
Displacement & Cylinders	13.0L / 6 Cylinders
Engine Speed	1800rpm
Engine Standby Power	500 kW / 670 HP
Engine Prime Power	450 kW / 603 HP
Aspiration	Turbocharged and Charge Air Cooled
Compression Ratio	17 : 1
Bore / Stroke	130 mm / 163 mm
Governor Type	ECM
Piston Speed	8.15 m/s
Friction Horsepower	37kW
Engine Water Flow	6.5 litre/sec.
Intake Air Flow	35 litre/sec
Exhaust Gas Flow	36.45 litre/sec.
Exhaust Gas Temperature	530 °C

Fuel System

Max Design Fuel Flow	204 kg/h
Max Heat Rejection to Return	5.36kW
Max Fuel Drain Restriction	27 kPa
Max Fuel Inlet Temperature	71 °C

Fuel Consumption

Standby Power	111 L/h
Prime Power (100%)	101 L/h
Prime Power (75%)	74 L/h
Prime Power (50%)	48.8 L/h
Prime Power (25%)	26 L/h

Electric System

Engine Cranking Motor	24V
Engine Battery Charge System	Negative Ground
Battery Qty, Rating, CCA	2 x 120Ah

Cooling System

Coolant Capacity, engine only	23.1 L
Min Fill Rate	19 litre/min.
Thermostat Range	82-94 °C
Min Pressure Cap	103 kPa
Max Coolant Temperature	102 °C

Exhaust System

Max Back Pressure	21 kPa
Min Exhaust Pipe Size	130 mm
Manifold Insulation	Not Acceptable
Turbocharger Insulation	Not Acceptable

Air Intake System

Max Intake Air Restriction	6.2 kPa (Dirty Element) 2.5 kPa (Clean Element)
Max Intake Manifold Temp.	-
Max Temp Rise from Ambient to Engine Air Inlet	11.1 °C

Lubrication System

Oil Pressure @ idle –minimum	89.6 kPa
Total Oil Capacity	45.42 L
Max Lube Oil Flow to All Accessories	7.57 L/min



Alternator Data

Manufacturer	Stamford / Aksa
Standards	BS EN 60034
Control System	Self Excited
A.V.R.	SX460
Voltage Regulation	$\pm 1 \%$
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 BACo6A
Input Voltage	100V ~ 250V AC
Output Voltage / Current	27,6V DC / 3A

Jacket Water Heater Data

Manufacturer	AKSA
Model	HTR3000W 100-120F
Input Voltage	Based on Genset Voltage
Power	3000W

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
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)
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

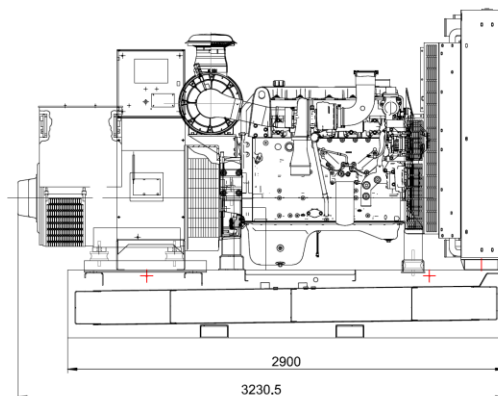


Enclosure Features

- ✓ 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

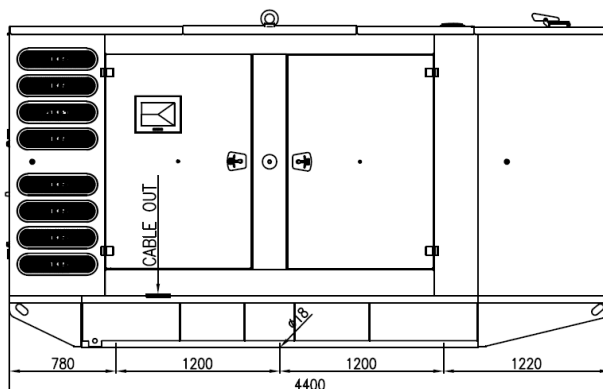
Open Skid Gen-Set Dimensions

Length	3230 mm
Width	1550 mm
Height	2185 mm
Dry Weight	4590 kg
Tank Capacity	700 L



Enclosed Gen-Set Dimensions

Length	4400 mm
Width	1606 mm
Height	2477mm
Dry Weight	5300 kg
Tank Capacity	700 L
Sound Pressure @ 7 meters	86dBA



**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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