

**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>APD440C-6</b>	Frequency / PF	<b>60Hz, 1800 rpm, 0.8pf</b>
Engine Make & Model	<b>Cummins 6ZTAA13-G2</b>	Alternator Make	<b>Stamford / Aksa</b>
Control Panel Model	<b>DSE 7320</b>	Base Frame / Enclosure	<b>AKSA MS70</b>

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

Engine	Stamford Alternator	Aksa Alternator	Voltage	Standby Power	Prime Power	Standby Current
6ZTAA13-G2	HCI444ES	AK5260	480 / 277V	440kVA	400kVA	529A
	HCI444E	AK5260	220 / 127V	440kVA	400kVA	1154A
	HCI444E	AK5280	208 / 120V	435kVA	400kVA	1207A

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	6ZTAA13-G2
Displacement & Cylinders	13.0L / 6 Cylinders
Engine Speed	1800rpm
Engine Standby Power	380 kW / 510 HP
Engine Prime Power	340 kW / 456 HP
Aspiration	Turbocharged and Charge Air Cooled
Compression Ratio	17 : 1
Bore / Stroke	130 mm / 163 mm
Governor Regulation	≤ 3%
Piston Speed	9.78 m/s
Friction Horsepower	45kW
Air to Fuel Ratio	24.5
Intake Air Flow	31.6 m <sup>3</sup> /min
Exhaust Gas Flow	32.9 kg/min.
Exhaust Gas Temperature	600 °C

### Fuel System

Max Design Fuel Flow	162 kg/h
Max Restriction @ Lift Pump	20.3 kPa
Max Fuel Drain Restriction	33.9 kPa
Max Fuel Inlet Temperature	71 °C

### Fuel Consumption

Standby Power	92.3 L/h
Prime Power (100%)	81.0 L/h
Prime Power (75%)	59.2 L/h
Prime Power (50%)	40.1 L/h
Prime Power (25%)	23.5 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
Max Coolant Friction Head External to Engine -1500rpm	75 kPa
Thermostat Range	82-94 °C
Min Pressure Cap	103 kPa
Max Coolant Temperature	102 °C

### Exhaust System

Max Back Pressure	13 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) 3.2 kPa (Clean Element)
Max Intake Manifold Temp.	85 °C
Max Temp Rise from Ambient to Engine Air Inlet	11.1 °C

### Lubrication System

Oil Pressure @ idle –minimum	82.7 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	± 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

**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 BACo6A
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)
- 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

**Jacket Water Heater Data**

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

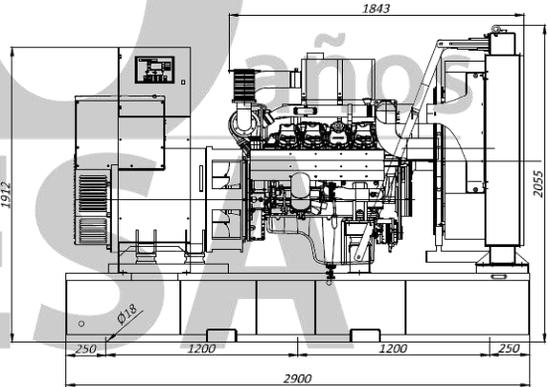


**Enclosure Features**

- ✓ 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

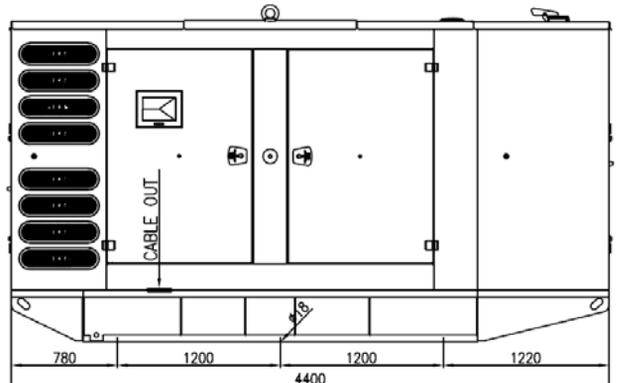
**Open Skid Gen-Set Dimensions**

Length	2900 mm
Width	1550 mm
Height	2055 mm
Dry Weight	3250 kg
Tank Capacity	700 L



**Enclosed Gen-Set Dimensions**

Length	4400 mm
Width	1606 mm
Height	2477mm
Dry Weight	4300 kg
Tank Capacity	700 L
Sound Pressure @ 7 meters	86



### 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.

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

#### SEDE PRINCIPAL:

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