

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	APD50A	Frequency / PF	50 Hz, 1500 rpm, 0.8pf
Engine Make & Model	Aksa A4CRX47	Alternator Make	Aksa
Control Panel Model	DSE 6020	Base Frame / Enclosure	AKSA ASM4A

Genset Rating – 50 Hz, 1500 rpm, 0.8pf

Engine	Alternator	Voltage	Standby Power	Prime Power	Standby Current
A4CRX47	AK337	400 / 230V	50kVA	45kVA	72A

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	Aksa
Model	A4CRX47
Displacement	4.68L
Cylinders	4 In-line
Engine Standby Gross Power	48 kWm
Engine Speed	1500 rpm
Aspiration	Nature inhaling air
Compression Ratio	17 : 1
Bore / Stroke	105 mm / 135 mm
Governor	Mechanical
Direction of Rotation	Anti-clockwise (viewed on flywheel)
Firing Order	1-3-4-2
Combustion Cycle	Four stroke, compression ignition
Steady State Speed Stability at Constant Load	± 2.5%
Total Weight (engine only - dry)	410 ± 20 kg
Sound Pressure	≤ 113 dBA

Electric System

Engine Cranking Motor	12V
Engine Battery Charge System	Negative Ground
Battery Qty, Rating, CCA	1 x 54Ah

Cooling System

Coolant Capacity – Engine only	6 liters
Thermostat Range	65 – 80 °C
Max Top Tank Temperature	99 °C
Coolant intake size	Φ52 mm
Coolant outlet size	Φ48 mm

Exhaust System

Max Back Pressure	6 kPa
Manifold Insulation	Not Acceptable
Turbocharger Insulation	Not Acceptable

Fuel System

Type of Injection	Direct Injection
Fuel Injection Pump	4BB
Fuel Oil Type	0# or 10#

Lubrication System

Oil Type	CF-4
Oil Capacity	4 L
Oil temp max to Bearings	115 °C
Oil Pressure @ Governed Speed	294 ~ 490 kPa

Fuel Consumption

Standby Power (110%)	12.2 L/h
Prime Power (100%)	11.1 L/h
Prime Power (75%)	8.3 L/h
Prime Power (50%)	5.5 L/h
Prime Power (25%)	2.8 L/h

Energy Balance

Energy in Fuel	6085 btu/min
Gross Heat to Power	2273 btu/min
Energy to Coolant & Oil	1702 btu/min
Energy to Exhaust	1963 btu/min
Heat to Radiation	143 btu/min


Alternator Data

Manufacturer	Aksa
Standards	BS EN 60034
Control System	Self Excited
A.V.R.	SX460
Voltage Regulation	$\pm 1\%$
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

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

Battery Charger & Electrical System Data

Manufacturer	AKSA
Model	SmartGen BACo6A
Input Voltage	100V ~ 250V AC
Output Voltage / Current	13.8V DC / 6A

Jacket Water Heater Data

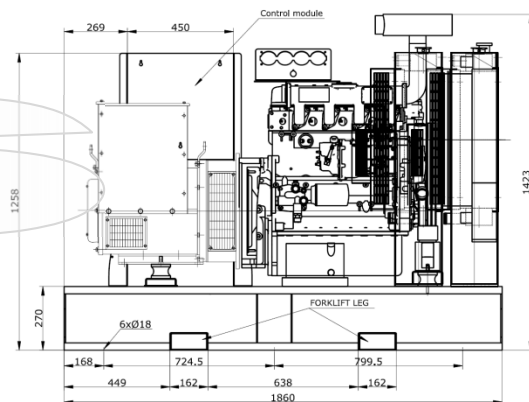
Manufacturer	AKSA	Test feature
Model	HTR500W 100-120F	Battery voltage monitoring
Input Voltage	1 ph, based on gen voltage	Hours counter
Power	500W	Comprehensive warning or shutdown on fault condition

Enclosure Features



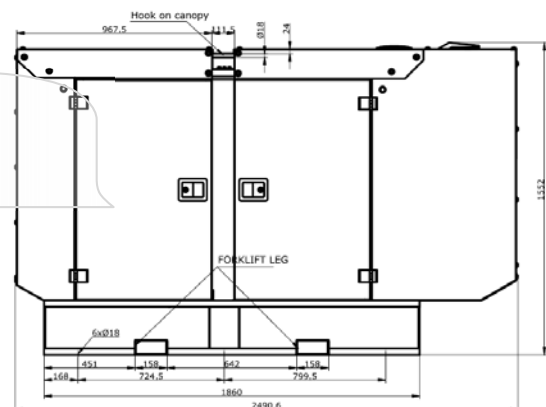
Open Skid Gen-Set Dimensions

Length	1860 mm
Width	900 mm
Height	1423 mm
Dry Weight	960 kg
Tank Capacity	154 L



Enclosed Gen-Set Dimensions

Length	2491 mm
Width	965 mm
Height	1552 mm
Dry Weight	1280 kg
Tank Capacity	154 L
Sound Pressure @ 7 meters	77.5 dB(A)



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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
- ☐ Voltage Regulation $\pm 0.5\%$ w/MX321 AVR
- ☐ Anti-condensation Heater
- ☐ 24 hours Capacity Base 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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Aksa Power Generation USA
371 Exchange Street, West Monroe, LA 71292
T: + 1 318 8558377
sales@aksausa.com



**Aksa Power Generation
USA & LATAM**
a member of
KAZANCI HOLDING

Aksa Power Generation LATAM
12320 NW 116th Street, Miami, FL 33178
T: + 1 786 4936857
sales@aksausa.com