

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 | APD55A-6 | Frequency / PF | 60Hz, 1800 rpm, 0.8pf |
| Engine Make & Model | Aksa A4CRX47 | Alternator Make | Aksa |
| Control Panel Model | DSE 6020 | Base Frame / Enclosure | AKSA ASM4A |

Genset Rating – 60Hz, 1800rpm, 0.8pf

| Engine | Alternator | Voltage | Standby Power | Prime Power | Standby Current |
|---------|------------|------------|---------------|-------------|-----------------|
| A4CRX47 | AK232 | 480 / 277V | 55kVA | 50kVA | 66A |
| | AK340 | 380 / 222V | 55kVA | 50kVA | 83A |
| | AK232 | 220 / 127V | 55kVA | 50kVA | 144A |
| | AK340 | 208 / 120V | 55kVA | 50kVA | 152A |

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**



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


Engine Data

| | |
|--|--|
| Manufacturer | Aksa |
| Model | A4CRX47 |
| Displacement | 4.68L |
| Cylinders | 4 In-line |
| Engine Standby Gross Power | 54 kWm |
| Engine Speed | 1800 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%) | 11.9 L/h |
| Prime Power (100%) | 10.8 L/h |
| Prime Power (75%) | 8.1 L/h |
| Prime Power (50%) | 5.4 L/h |
| Prime Power (25%) | 2.7 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 |

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Alternator Data

Controller Data

| | |
|------------------------|-------------------------|
| Manufacturer | Aksa |
| Standards | BS EN 60034 |
| Control System | Self Excited |
| A.V.R. | SX460 |
| 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 |

| | |
|--------------|----------------------------|
| 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

Battery Charger & Electrical System Data

| | |
|--------------------------|-----------------|
| Manufacturer | AKSA |
| Model | SmartGen BAC06A |
| Input Voltage | 100V ~ 250V AC |
| Output Voltage / Current | 13,8V DC / 6A |

- Alternative configuration
- Three phase generator monitoring
- Current monitoring and protection
- Power monitoring (kW, kVA, kVAr)
- Reverse power (kW & kVAr) protection

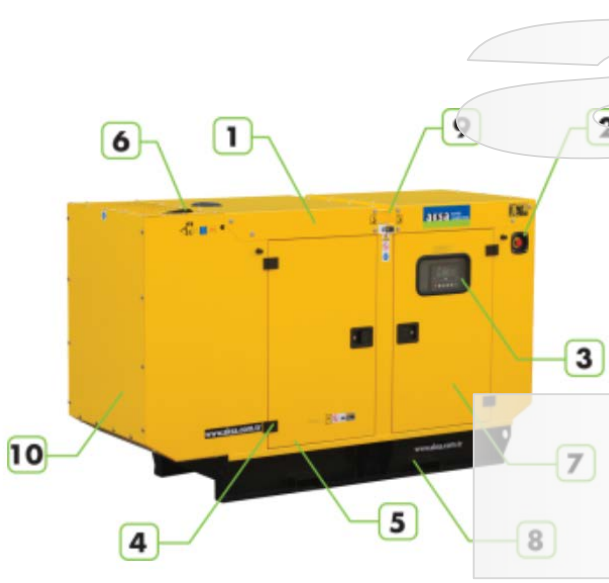
Jacket Water Heater Data

| | |
|---------------|----------------------------|
| Manufacturer | AKSA |
| Model | HTR500W 100-120F |
| Input Voltage | 1 ph, based on gen voltage |
| Power | 500W |

- Three phase utility monitoring
- Test feature
- Battery voltage monitoring
- Hours counter
- Comprehensive warning or shutdown on fault condition

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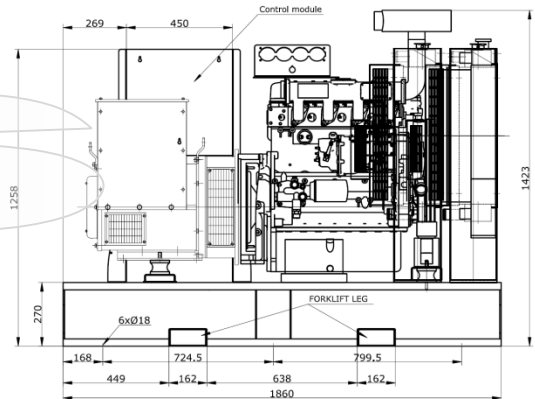
Enclosure Features



- ✓ 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
- ✓ Base Frame Lifting Hooks
- ✓ Base Fuel Tank and Forklift Pockets
- ✓ Easy Access for Maintenance
- ✓ Sound Absorb High Density Foam

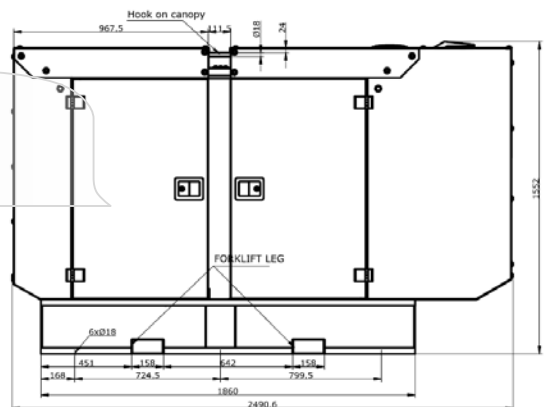
Open Skid Gen-Set Dimensions

| | |
|---------------|---------|
| 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 | 78 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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