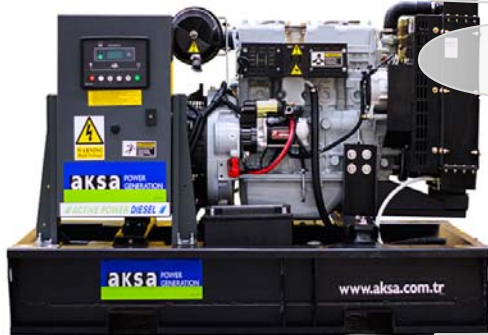


AKSA Power Generation has been producing industrial generator sets with an innovative compact design and excellence in quality for over 30 years. AKSA has been providing reliable power through three main production plants and over 15 branch offices worldwide.



General Characteristics

| | | | |
|---------------------|---------------------|------------------------|------------------------------|
| Model Name | APD20A | Frequency / PF | 50Hz, 1500 rpm, 0.8pf |
| Engine Make & Model | Aksa A4CRX24 | Alternator Make | Aksa |
| Control Panel Model | DSE 6020 | Base Frame / Enclosure | AKSA ASM3 |

Genset Rating – 50Hz, 1500rpm, 0.8pf

| Engine | Alternator | Voltage | Standby Power | Prime Power | Standby Current |
|---------|------------|------------|---------------|-------------|-----------------|
| A4CRX24 | AK218 | 400 / 230V | 20kVA | 18kVA | 28A |

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 | A4CRX24 |
| Displacement & Cylinders | 2.545L / 4 Cylinders |
| Engine Speed | 1500rpm |
| Engine Standby Power | 21 kW / 28 HP |
| Engine Prime Power | 19 kW / 25.5 HP |
| Aspiration | Naturally Aspired |
| Compression Ratio | 18 : 1 |
| Bore / Stroke | 90 mm / 100 mm |
| Governor | Mechanical |
| Piston Speed | 5 m/s |
| Friction Horsepower | 15 Kw |
| Intake Air Flow | 25.7 L/s |
| Exhaust Gas Flow | 65 L/s |
| Exhaust Gas Temperature | 460 °C |

Electric System

| | |
|------------------------------|----------------------|
| Engine Cranking Motor | 12V |
| Engine Battery Charge System | 50A, Negative Ground |
| Battery Qty, Rating, CCA | 1 x 54Ah |

Cooling System

| | |
|---|------------|
| Coolant Capacity | 18.5 L |
| Max Coolant Friction Head External to Engine 1500rpm | 13 kPa |
| Thermostat Range | 76 – 85 °C |
| Min Pressure Cap | 48 kPa |
| Max Top Tank Temperature | 104 °C |

Exhaust System

| | |
|----------------------------|----------------|
| Max Back Pressure | 10 kPa |
| Manifold Insulation | Not Acceptable |
| Standard Exhaust Pipe Size | 60 mm |

Fuel System

| | |
|---|----------------------|
| Type of Injection | Direct Injection |
| Max Restriction @ Lift Pump | 6 kPa (Clean Filter) |
| Max Allowable Head on Injector Return Line | 4 kPa |
| Max Fuel Pump Supply | 30 L/h |

Air Intake System

| | |
|---|--|
| Max Intake Air Restriction | 1.87 kPa (Dirty Filter) 1.24 kPa (Clean Filter) |
| Min Dirt Holding Capacity | 10 g/L/s |
| Max Temp Rise from Ambient to Inlet of Turbo | 17 °C |

Fuel Consumption

| | |
|----------------------|---------|
| Standby Power (110%) | 5.8 L/h |
| Prime Power (100%) | 5.4 L/h |

Lubrication System

| | |
|----------------------------|----------|
| Max Oil Temperature | 120 °C |
| Oil Capacity : High - Low | 8 – 6 L |
| Min Required Lube Capacity | 8.5 L |
| Max Oil Consumption | 0.02 L/h |


Alternator Data

| | |
|------------------------|-------------------------|
| Manufacturer | Aksa |
| Standards | BS EN 60034 |
| Control System | Self Excited |
| A.V.R. | SX460 |
| Voltage Regulation | ± 1.5 % |
| Insulation System | Class H |
| Protection | IP22 |
| 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 BAC06A |
| 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 |

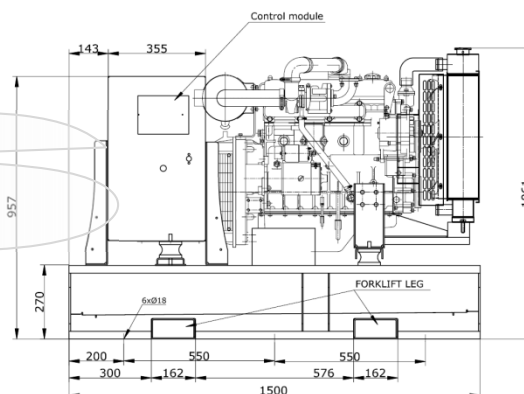
Enclosure Features

- ✓ 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



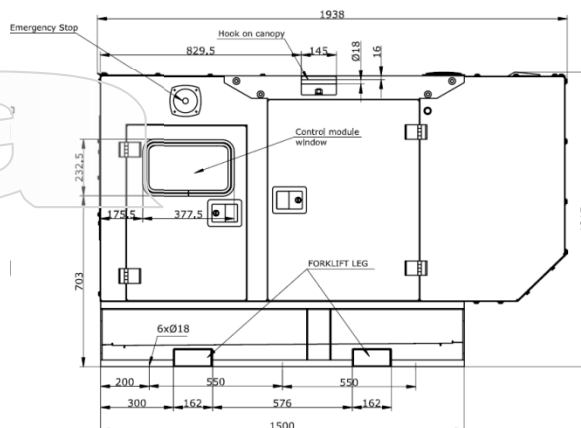
Open Skid Gen-Set Dimensions

| | |
|---------------|---------|
| Length | 1500 mm |
| Width | 900 mm |
| Height | 1061 mm |
| Dry Weight | 665 kg |
| Tank Capacity | 95 L |



Enclosed Gen-Set Dimensions

| | |
|---------------------------|------------|
| Length | 1938 mm |
| Width | 963mm |
| Height | 1215 mm |
| Dry Weight | 870 kg |
| Tank Capacity | 95 L |
| Sound Pressure @ 7 meters | 72.5 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)
- ☐ EBS
- ☐ Anti-condensation Heater
- ☐ Single wall fuel tank – 24hours capacity
- ☐ Double wall fuel tank – 24hours capacity
- ☐ 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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