

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	APD45MA-6	Frequency / PF	60Hz, 1800 rpm, 1pf
Engine Make & Model	Aksa A3CRX32T	Alternator Make	Aksa
Control Panel Model	DSE 6020	Base Frame / Enclosure	AKSA ASM3A

Genset Rating – 60Hz, 1800rpm, 1pf, Single phase

Engine	Alternator	Voltage	Standby Power kVA / kW	Prime Power kVA / kW	Standby Current
A3CRX32T	AK225M	220 / 110V	36.7	33.4	166A

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	A3CRX32T
Displacement	3.12L
Cylinders	3 In-line
Engine Standby Gross Power	43 kWm
Engine Speed	1800 rpm
Aspiration	Turbocharged
Compression Ratio	17: 1
Bore / Stroke	105 mm / 120 mm
Governor	Mechanical
Direction of Rotation	Anti-clockwise (viewed on flywheel)
Firing Order	1-2-3
Combustion Cycle	Four stroke, compression ignition
Steady State Speed Stability at Constant Load	± 2.5%
Total Weight (engine only - dry)	430 ± 20 kg
Sound Pressure	≤ 111 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	76 – 95 °C
Max Top Tank Temperature	99 °C
Coolant intake size	Φ45 mm
Coolant outlet size	Φ45 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	3JI402
Fuel Oil Type	0# or 10#

Lubrication System

Oil Type	L-ECD 15W/40
Oil Capacity	11 L
Oil temp max to Bearings	115 °C
Oil Pressure @ Governed Speed	294 ~ 490 kPA

Fuel Consumption

Standby Power (110%)	11 L/h
Prime Power (100%)	10 L/h
Prime Power (75%)	7.5 L/h
Prime Power (50%)	5.0 L/h
Prime Power (25%)	2.5 L/h

Energy Balance

Energy in Fuel	5477 btu/min
Gross Heat to Power	2047 btu/min
Energy to Coolant & Oil	1533 btu/min
Energy to Exhaust	1678 btu/min
Heat to Radiation	128 btu/min

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Alternator Data

Manufacturer	Aksa
Standards	BS EN 60034
Control System	Self Excited
A.V.R.	SX460
Voltage Regulation	± 1 %
Insulation System	Class H
Protection	IP22
Rated Power Factor	1
Stator Winding	Double Layer Concentric
Winding Pitch	Two Thirds
Winding Leads	4
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

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
- Three phase utility monitoring

Jacket Water Heater Data

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

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

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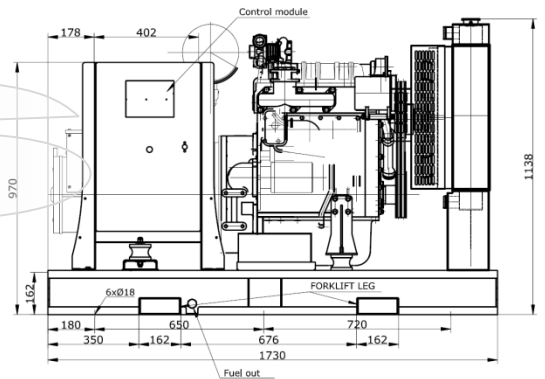
Enclosure Features



- ✓ 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

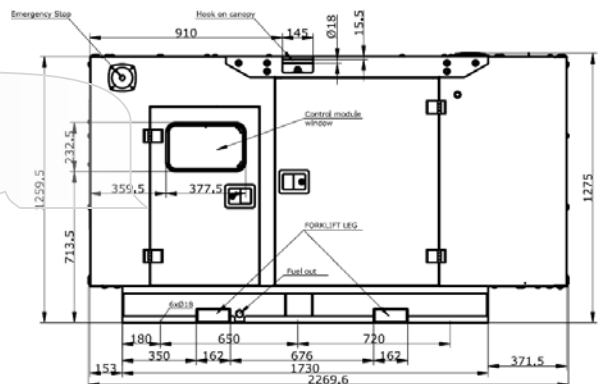
Open Skid Gen-Set Dimensions

Length	1730 mm
Width	900 mm
Height	1130 mm
Dry Weight	892 kg
Tank Capacity	82 L



Enclosed Gen-Set Dimensions

Length	2279 mm
Width	969 mm
Height	1275 mm
Dry Weight	1100 kg
Tank Capacity	82 L
Sound Pressure @ 7 meters	72 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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