



**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	APD-ULP9
Engine Make	Perkins
Engine Model	403D-11G
Alternator Make	Stamford
Control Panel Make & Model	DSE 7320
Frequency & Speed	60Hz, 1800rpm
Enclosure Make & Model	AKSA AUL 21



**Genset Rating**

Engine	Alternator	Voltage	Standby Power	Power Factor	Standby Current
403D-11G	PI044E (Wnd-311)	480 / 277V	9kW	0.8	13.5A
	PI044E (Wnd-06)	240 / 120V, 1ph	9kW	1	21.7A
	PI044E (Wnd-311)	208 / 120V	9kW	0.8	31.3A
	PI044E (Wnd-17)	600 / 347V	9kW	0.8	10.8A

**\*EPA – Certified for Emergency Stationary Applications**

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** according to the UL test program.

The generator set meets **NFPA70, 99, 110, 37** Level 1 when equipped with the necessary accessories and installed per NFPA standards.



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**Engine Data**

Manufacturer	Perkins
Model	403D-11G
Displacement & Cylinders	1.131 L / 3 Cylinders
Engine Speed	1800rpm
Engine Standby Power	11.8 kW
Engine Prime Power	10.7 kW
Aspiration	Naturally aspirated
Compression Ratio	23 : 1
Bore / Stroke	77 mm / 81 mm
Break Mean Effective Pressure	TBA
Engine Coolant Flow	32.5 l/min
Combustion Air Flow	0.9 m <sup>3</sup> /min
Exhaust Gas Flow	2.4 m <sup>3</sup> /min
Exhaust Gas Temperature	515 °C
Overall Thermal Efficiency	31 %
Speed Variation at Constant Load	±0.75 %

**Fuel System**

Combustion System	Indirect Injection
Nozzle Opening Pressure	14.7 Mpa
Fuel Lift Pump Flow/hour	63 liters/hr

**Fuel Consumption**

Standby Power (100%)	0.95 gal/h
Prime Power (100%)	0.80 gal/h
Prime Power (75%)	0.60 gal/h
Prime Power (50%)	0.45 gal/h

**Electric System**

System Voltage	12V
Alternator	15A, 12V
Battery Qty, Rating	1 x 36Ah

**Cooling System**

Radiator Face Area	0.147 m <sup>2</sup>
Fan Number of Plates/Material	7 / Plastic
Total System Capacity	5.2 L (1.4 gal)
Max Top Tank Temperature	112 °C
Thermostat Range	82 – 95 °C

**Exhaust System**

Exhaust Temperature	515 °C
Maximum Back Pressure	10.2 kPa
Exhaust Gas Flow	2.4 m <sup>3</sup> /min

**Air Intake System**

Combustion Air Flow	0.9 m <sup>3</sup> /min
Max Intake Air Restriction (Clean Element)	3 kPa
Air Filter Type	Dry Paper Element

**Lubrication System**

Total System Capacity	4.9 L (1.3 gal)
Normal Oil Temp	125 °C
Oil Pressure – relief valve opens	304 – 500 kPa


**Alternator Data**

Manufacturer	Stamford
Standards	BS EN 60034
Control System	EBS
A.V.R.	AS480
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

**Battery Charger & Electrical System Data**

Manufacturer	ComAp
Model	InteliCharger
Input Voltage	85V ~ 264V AC
Output Voltage / Current	13.8V Float / 4A pk

**Jacket Water Heater Data**

Manufacturer	Hotstart
Model	TPS051GT10-000
Input Voltage	120V
Power	500W

**Controller Data**

Manufacturer	DSE
Model	7320 MK II

**Controller Features & Benefits**

- Microprocessor controlled, UL & NFPA110 Compatible
- License free PC Software (Non-proprietary 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, two wire start/stop at Auto mode
- Front panel editing with PIN protection
- Support up to three remote display modules
- Configurable timers and alarms
- Multiple date and timer scheduler
- Integral PLC editor
- 'Protections disabled' feature
- Load switching (load shedding and dummy load outputs)
- Fully configurable via DSE Configuration Suite PC Software
- SCADA monitoring via DSE Configuration Suite PC Software

**Protection**

- ✓ Gen. Voltage – under / over
- ✓ Gen. Freq. – under / over
- ✓ Engine Speed – under / over
- ✓ Engine Oil Pressure – low
- ✓ Engine Temp – low / high
- ✓ Battery Voltage – low / high
- ✓ Weak Battery
- ✓ Fail to Start / Stop
- ✓ Charge Alternator Fail
- ✓ Over Current & Load (kW/kVAr)
- ✓ Unbalanced Load
- ✓ Independent Earth Fault
- ✓ Reverse Power
- ✓ Loss of Speed Signal

**Instruments**

- ✓ Gen. Voltage (L-L/L-N)
- ✓ Gen. Frequency
- ✓ Engine speed
- ✓ Oil Pressure
- ✓ Water Temperature
- ✓ Battery Voltage
- ✓ Run Time
- ✓ Phase Sequence
- ✓ Power monitoring (kWh/kVAh/kVArh)
- ✓ Power (kWh/kVAh/kVArh)
- ✓ Power Factor
- ✓ Generator Current
- ✓ Generator Load (%)
- ✓ Earth Current



**Enclosure Features**

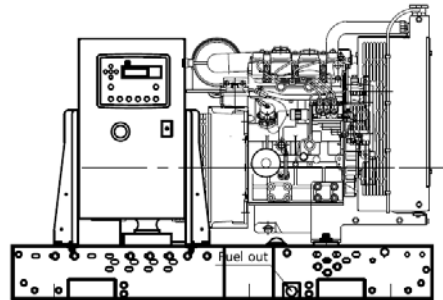
- ✓ Heavy Duty Steel / Aluminum Structure
- ✓ E-Stop on Enclosure
- ✓ Control Panel Eliminated from Engine Vibrations
- ✓ Standard Sound Attenuation Foam
- ✓ Plastic Covered Corrosion Resistant Locks & Hinges

**Enclosure Features**

- ✓ Internally Mounted Exhaust System with Rain Cap
- ✓ Coolant Fill Cap
- ✓ Removable Base Frame Lifting Hooks
- ✓ Oil & Coolant Drain Ports
- ✓ Easy Access for Maintenance

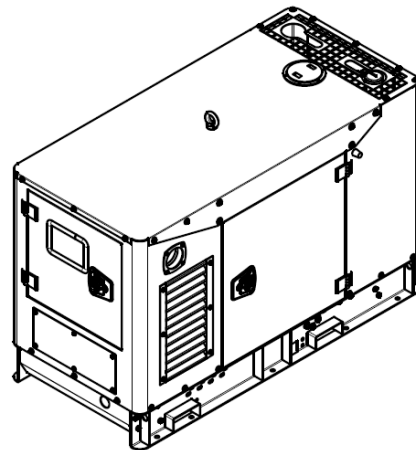
**Enclosed Gen-Set Dimensions – Open**

Length	66 in
Width w/o lift hooks	30 in
Height	32 in
Dry Weight	670 lb



**Enclosed Gen-Set Dimensions**

Length	66 in
Width w/o lift hooks	30 in
Height	41 in
Dry Weight	1050 lb
Sound Pressure @ 7 meters	68 dBA



**Fuel Tank - UL142 Listed Base Design**

Size	24hr (25gal)	48hr (50gal)	72hr (75gal)
Dimensions (L/W/H) (in)	80 / 30 / 8	80 / 30 / 12	80 / 30 / 18
Weight (lb)	525	625	750

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**Standard Features & Accessories**

- ✓ UL2200 Certification
- ✓ Heavy Duty Steel Base Frame
- ✓ EBS
- ✓ Engine Jacket Water Heater
- ✓ Battery and Battery Rack
- ✓ Battery Charger
- ✓ Anti Vibration Pads between Engine/Alternator & Base Frame
- ✓ Critical Grade Silencer Inside Enclosure
- ✓ Residential Grade Silencer Set for Open Skid Sets
- ✓ Exhaust outlet rain cap and radiator fill cap
- ✓ Sound Absorb Foam Material for Enclosure
- ✓ Emergency Stop Button
- ✓ Oil Drain Valve
- ✓ Coolant Drain Valve
- ✓ Jacket Water Heater Isolation Valves
- ✓ Flex Fuel Lines
- ✓ Air Filter Restriction Gauge
- ✓ Engine Manifold Cover
- ✓ Turbocharger Cover
- ✓ Protection Covers for Rotating Parts
- ✓ Exhaust Insulation Cover
- ✓ Enclosure DC Light
- ✓ Operations Manual
- ✓ 24 Months / 2000 hours Limited Standby Warranty

**Optional Accessories**

- Main Line CB (3 / 4 Poles – 80% / 100% rated)
- Upsize Alternator
- Anti-condensation Heater
- Sub Base Fuel Tank (UL142 / UL2085)
- Fuel Level Display on Controller
- Fuel Level 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
- Battery Charger 10/20 Amp
- Shunt Trip / Aux Contacts
- Spring Anti-vibration Isolators
- Automatic Transfer Panel (ATS)
- 5 Years / 2000 hours Limited Comprehensive Warranty

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