

### APD-ULJ500



**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-ULJ500

Engine Make John Deere

Engine Model 6135HFG75

Alternator Make Stamford

Control Panel Make & Model DSE 7320

Frequency & Speed 60Hz, 1800rpm

Enclosure Make & Model AKSA AUL 71/72



#### **Genset Rating**

Engine	Alternator	Voltage	Standby Power	Power Factor	Standby Current
	HCI534D (Wnd-311)	480 / 277V	500kW	0.8	752A
6135HFG75	HCI534E (Wnd-311)	240 / 120V	500kW	0.8	1504A
	HCI534E (Wnd-311)	208 / 120V	500kW	0.8	1735A
	HCI534D (Wnd-17)	600 / 347V	500kW	0.8	601A

#### \*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.

















# APD-ULJ500



Engine Data		Electric System	
Manufacturer	John Deere	System Voltage	12V / 24V
Model	6135HFG75	Min Voltage at ECU during crank	6V for 12V system
Displacement & Cylinders	13.5 L / 6 Cylinders		10V for 24V system
Engine Type	In-line, 4 Cycle	Battery Qty, Rating	2 x 120Ah
Engine Speed	1800rpm	<b>Cooling System</b>	
Engine Standby Power	563 kW	Radiator Cooling System Type	Closed Circuit
Aspiration	Turbocharged & Air to Air Aftercooled	Radiator Ambient Temp	> 50 °C
Compression Ratio	16.0:1	Coolant Capacity, Engine Only	19 quart
Bore / Stroke	132 mm / 165 mm	Max Top Tank Temp	221 °F
Governor type	Electronic	Thermostat, Start – Fully Open	180–198 °F
Engine crankcase vent system	Open	<b>Exhaust System</b>	
Fan Power	22.5kW	Exhaust Temperature	975 °F
BMEP, Standby Power	2780 kPa	Max Allowable Exhaust Restriction	7.5 kPa
Friction Power	41kW	Exhaust Gas Flow	3433 ft <sup>3</sup> /min
Designed / Calibrated to Meet	EPA Tier 2	Exhaust Gas Flow	3433 IC/IIIII
Fuel System		Air Intake System	
ECU Description	L15 Controller	Engine Air Flow	1342 ft <sup>3</sup> /min
Max Fuel Inlet Temperature	212 °F	Max Intake Air Restriction (Clean Element)	3.75 kPa
Total Fuel Flow	401 lb/hr	Air Filter Type	Dry Paper Element
<b>Fuel Consumption</b>		<b>Lubrication System</b>	
Standby Power (100%)	35.4 gal/h	Oil Pressure at Rated Speed	287 kPa
Standby Power (75%)	27.3 gal/h	In-Pan Oil Temperature	255 °F
Standby Power (50%)	19.7 gal/h	Max Oil Carryover in Blow-by	0.007 lb/hr
Standby Power (25%)	10.1 gal/h	Max Crankcase Pressure	0.5 kPa







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Manufacturer	Stamford
Standards	BS EN 60034
Control System	PMG
A.V.R.	MX341
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

#### **Battery Charger & Electrical System Data**

Manufacturer	ComAp
Model	InteliCharger
Input Voltage	85V ~ 264V AC
Output Voltage / Current	27.2V Float / 2.5A pk

#### Jacket Water Heater Data

Jacket Water Heater Data				
Manufacturer	Hotstart			
Model	CTM25210-N00			
Input Voltage	240V			
Power	2500W			

#### **Controller Data**

Manufacturer	DSE
Model	7320 MK II

#### **Controller Features & Benefits**

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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 Instruments** Gen. Voltage – under / over Gen. Voltage (L-L/L-N) Gen. Freq. - under / over Gen. Frequency Engine Speed – under / over Engine speed Engine Oil Pressure - low Oil Pressure Engine Temp - low / high Water Temperature Battery Voltage - low / high **Battery Voltage Weak Battery** Run Time Fail to Start / Stop Phase Sequence Power monitoring **Charge Alternator Fail** (kWh/kVAh/kVArh) Over Current & Load Power (kW/kVAr) (kWh/kVAh/kVArh) Unbalanced Load **Power Factor Independent Earth Fault Generator Current**

**Reverse Power** 

Loss of Speed Signal

Generator Load (%)
Earth Current





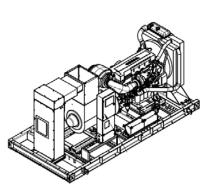
#### **Enclosure Features**

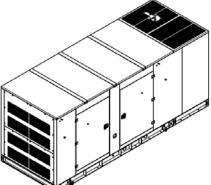
- ✓ Heavy Duty Steel / Aluminum Structure
- ✓ E-Stop on Enclosure
- $\checkmark$  Control Panel Eliminated from Engine Vibrations
- ✓ Standard Sound Attenuation Foam
- ✓ Plastic Covered Corrosion Resistant Locks & Hinges

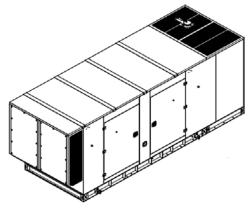
#### **Enclosure Features**

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

Open Skid Gen		Level 1 Enclosure		Level 2 Enclosure	
Length	157.5 in	Length	205 in	Length	224.6 in
Width w/o lift hooks	74.8 in	Width w/o lift hooks	77 in	Width w/o lift hooks	77 in
Height	71 in	Height	89.9 in	Height	89.9 in
Dry Weight	9495 lb	Dry Weight	12920 lb	Dry Weight	13925 lb
		Sound Pressure @ 7 meters	76 dB(A)	Sound Pressure @ 7 meters	74 dB(A)







#### Fuel Tank - UL142 Listed Base Design

Size	24hr (855gal)	48hr (1780gal)	72hr (2550gal)
Dimensions (L/W/H) (in)	225 / 74.8 / 18	225 / 74.8 / 35	300 / 74.8 / 36
Weight (lb)	3200	4350	5450

## APD-ULJ500



#### **Standard Features & Accessories**

- ✓ UL2200 Certification
- ✓ Heavy Duty Steel Base Frame
- ✓ PMG w/MX341 AVR
- ✓ 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

#### **AKSA POWER GENERATION USA LLC**

371 Exchange Street, West Monroe, Louisiana, 71292

Tel: 318.855.8377 Fax: 318.855.8381 E-mail: sales@aksausa.com

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#### **Optional Accessories**

- ☐ Main Line CB (3 / 4 Poles 80% / 100% rated)
- Upsize Alternator
- □ Voltage Regulation ±0.5% w/MX321 AVR
- Anti-condensation Heater
- ☐ Sub Base Fuel Tank (UL142 / UL2085)
- ☐ 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
- ☐ 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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