

## APD-ULJ30



**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-ULJ30

Engine Make John Deere

Engine Model 3029TFG89

Alternator Make Stamford

Control Panel Make & Model DSE 7320

Frequency & Speed 60Hz, 1800rpm

Enclosure Make & Model AKSA AUL 31/32



## **Genset Rating**

Engine	Alternator	Voltage	Standby Power	Power Factor	Standby Current
	PI144H (Wnd-311)	480 / 277V	30kW	0.8	45A
3029TFG89	PI144H (Wnd-311)	240 / 120V, 1ph	30kW	1	90A
	PI144H (Wnd-311)	208 / 120V	30kW	0.8	104A
	PI144E (Wnd-17)	600 / 347V	30kW	0.8	36A

## \*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.



















Engine Data		Electric System	
Manufacturer	John Deere	System Voltage	12V
Model	3029TFG89	Starter Rolling Current @32°F	640 Amps
Displacement & Cylinders	2.9 L / 3 Cylinders	Battery Qty, Rating	1 x 54Ah
Engine Type	In-line, 4 Cycle		
Engine Speed	1800rpm	Cooling System	
Engine Prime Power w/Fan	31kW	Radiator Cooling System Type	Closed Circuit
Engine Standby Power w/Fan	35kW	Radiator Ambient Temp	> 50 °C
Aspiration	Turbocharged	Coolant Capacity, Engine Only	6 quart
Compression Ratio	17.2:1	Max Top Tank Temp	221 °F
Bore / Stroke	106 mm / 110 mm	Thermostat, Start – Fully Open	180– 201 °F
Governor type	Mechanical	Exhaust System	
Engine crankcase vent system	Open	Exhaust Temperature	1076°F
Load Acceptance, ISO8528-5	G3	Max Allowable Exhaust	7.5 kPa
BMEP, Standby Power	714 kPa	Restriction	000 5 3 / 1
Friction Power	16kW	Exhaust Gas Flow	293 ft. <sup>3</sup> /min
Designed / Calibrated to Meet	EPA Interim Tier 4	Air Intake System	
Fuel System		Engine Air Flow	127 ft. <sup>3</sup> /min
Combustion System	Direct Injection	Max Intake Air Restriction (Clean Element)	3.75 kPa
Max Fuel Inlet Temp.	176 °F	Air Filter Type	Dry Paper Element
Total Fuel Flow	209 lb/hr	Lubrication System	
<b>Fuel Consumption</b>		Oil Pressure at Rated Speed	48 psi
Standby Power (100%)	2.6 gal/h	Oil Pressure at low idle	NA
Standby Power (75%)	1.98 gal/h	Max Crankcase Pressure	0.5 kPa
Standby Power (50%)	1.36 gal/h		
Standby Power (25%)	0.85 gal/h		







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А	lternator	Data

Stamford Manufacturer BS EN 60034 Standards Control System **EBS** A.V.R. AS480 Voltage Regulation  $\pm$  1 % Class H **Insulation System** Protection IP23 **Rated Power Factor** 0.8 Stator Winding **Double Layer Concentric** Two Thirds Winding Pitch 12 Winding Leads THF < 2 % **Telephone Interference** Waveform Distortion No Load < 1.5 %

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

2250 rev/min

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

#### **Jacket Water Heater Data**

Maximum Over speed

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	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			
✓ Charge Alternator Fail	<ul><li>✓ Power monitoring (kWh/kVAh/kVArh)</li></ul>			
✓ Over Current & Load (kW/kVAr)	✓ Power (kWh/kVAh/kVArh)			
✓ Unbalanced Load	✓ Power Factor			
✓ Independent Earth Fault	✓ Generator Current			

Reverse Power

Loss of Speed Signal

Generator Load (%)

**Earth Current** 





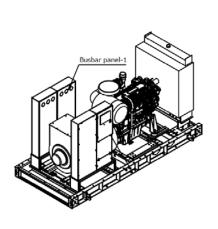
## **Enclosure Features**

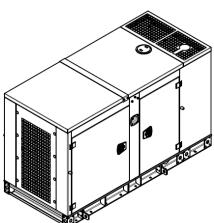
- ✓ Heavy Duty Steel / Aluminum Structure
- ✓ E-Stop on Enclosure
- ✓ Control Panel Eliminated from Engine Vibrations
- ✓ Standard Sound Attenuation Foam
- ✓ Plastic Covered Corrosion Resistant Locks & Hinges

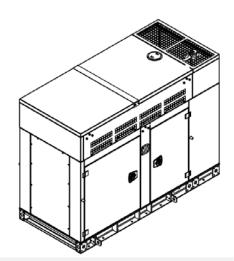
## **Enclosure Features**

- $\checkmark$  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	72 in	Length	90.1 in	Length	90.1 in
Width w/o lift hooks	39.4 in	Width w/o lift hooks	42 in	Width w/o lift hooks	42 in
Height	45.1 in	Height	56 in	Height	69 in
Dry Weight	1800 lb	Dry Weight	2500 lb	Dry Weight	2800 lb
		Sound Pressure @ 7 meters	69 dB(A)	Sound Pressure @ 7 meters	66 dB(A)







## Fuel Tank - UL142 Listed Base Design

Size	24hr (65gal)	48hr (130gal)	72hr (190gal)
Dimensions (L/W/H) (in)	112 / 39.4 / 9	112 / 39.4 / 15	112 / 39.4 / 20
Weight (lb)	900	1030	1200

# APD-ULJ30



## **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

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## **Optional Accessories**

- ☐ Main Line CB (3 / 4 Poles 80% / 100% rated)
- Upsize Alternator
- Anti-condensation Heater
- PMG w/upsize alternator
- ☐ 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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