**AKSA** POWER GENERATION

**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-ULM2000
Engine Make	Mitsubishi
Engine Model	S16R-Y2PTAW2-1
Alternator Make	Stamford
Control Panel Make & Model	DSE 732
Frequency & Speed	60Hz, 1800rpm
Enclosure Make & Model	AKSA ISO Container UL
Genset Rating	

Engine	Alternator	Voltage	Standby Power	Power Factor	Standby Current
	PI734E(Wnd-312)	480 / 277V	2000kW	0.8	3010A
S16R- Y2PTAW2-1	N.A.	240/120V -		-	-
	N.A.	208/120V	-	-	-
	PI734E(Wnd-17)	600/347	2000kW	0.8	2408A

#### \*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		Electric System	
Manufacturer	Mitsubishi	Battery Charge Alternator	24V / 30Ah
Model	S16R-Y2PTAW2-1	Starting Motor Capacity	7.5 kW x 2
Displacement & Cylinders	65.37 L 16 Cylinders	Battery Qty, Rating, CCA	4 x 200Ah, 1150CCA
Engine Speed	1800rpm		
Engine Standby Power wo/Fan	2180 kW	Cooling System	
Engine Prime Power wo/Fan	1982 kW	Radiator Cooling System Type	Closed Circuit
Aspiration	Turbo-charged, InterCooler	Radiator Ambient Temp	> 50 °C
Compression Ratio	14:1	Coolant Capacity, Engine Only	44.9 gal
Bore / Stroke	170 mm / 180 mm	(Jacket & Air Cooler) Max Coolant Temp at Engine	208 °F
Break Mean Effective Pressure	323 psi	Outlet 'Thermostat, Start – Fully Open	160–185 °F
Mean Piston Speed	10.8 m/s	Mermostat, Start – Fully Open	100–183 F
Allowable Fan Loss Power	50 kW	Exhaust System	
Max Regenerative Power Absorption Capacity wo Fan	192 kW	Exhaust Outlet Size	202 mm
Steady State Speed Stability	$\pm 0.25$ %	Max Allowable Back Pressure	600 mmH2O
Max Over Speed Capacity	2100 rpm	Exhaust Gas Flow	544 m <sup>3</sup> /min
Wet Weight – Engine Only	15060 lb	Exhlaust Gas Flow	J <del>44</del> III 7 IIIII
Fuel System		Air Intake System	
Fuel Injector	Mitsubishi PS8 Type x 2	Intake Air Flow	206 m <sup>3</sup> /min
Max Suction of Feed Pump	75 mmHg	Max Intake Air Restriction (Clean Element)	400 mmH2O
Max Static Head of Return & Leak Pipe	150 mmHg	Air Filter Type	Dry Paper Element
Fuel Consumption		Lubrication System	
Standby Power (110%)	160.0 gal/h	Total System Capacity	60.8 gal
Prime Power (100%)	141.0 gal/h	Sump Capacity Max / Min	53 gal / 37 gal
Prime Power (75%)	106.2 gal/h	Max Oil Temp	230 °F
Prime Power (50%)	71.4 gal/h	Oil Pressure at Rated Speed	71 – 93 psi
Prime Power (25%)	40.5 gal/h		

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Alternator Data		Controller Data	
Manufacturer	Stamford	Manufacturer	DSE
Standards	BS EN 60034	Model	7320
Control System	PMG	Туре	Auto Mains Failure Control
A.V.R.	MX321		
Voltage Regulation	$\pm$ 0.5 %	Controller Features & Ben	efits
Insulation System	Class H	Microprocessor controlled	
Protection	IP23	License free PC Software	
Rated Power Factor	0.8	IP65 rating offers increased resista	nce to water ingress
Stator Winding	Double Layer Concentric	Modules can be integrated to build	ling management systems
Winding Pitch	Two Thirds	Real time clock provides accurate e	event log
Winding Leads	12	Four line back-lit LCD text display	
Telephone Interference	THF < 2 %	Five key menu navigation	
Waveform Distortion	No Load < 1.5 %	Front panel editing with PIN prote	ction
Maximum Over speed	2250 rev/min	Support up to three remote display	/ modules
		Configurable timers and alarms	
Battery Charger & Electric	al System Data	Multiple date and timer scheduler	
Manufacturer	ComAp	Integral PLC editor	
Model	InteliCharger	'Protections disabled' feature	
Input Voltage	$85V \sim 264V AC$	kW & kVAr protection	
Output Voltage / Current	27.2V Float / 2.5A pk	Reverse power (kW & kVAr) protec	ction
Jacket Water Heater Data		Power monitoring (kWh, kVAr, kV	Ah, kVArh)
Manufacturer	Hotstart	Load switching (load shedding and	l dummy load outputs)
Model	CSM10902-000	Unbalanced load protection	
Input Voltage	240V	Independent Earth Fault trip	
Power	9000W	Fully configurable via DSE Configu	uration Suite PC Software
		SCADA monitoring via DSE Config	guration Suite PC Software

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### Enclosure Features

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- ✓ Heavy Duty Steel ISO Container
- ✓ E-Stop on Enclosure
- ✓ Control Panel Eliminated from Engine Vibrations
- ✓ Standard Sound Attenuation Foam
- ✓ Stainless Steel Locks & Hinges

### **Enclosure Features**

✓ Externally Mounted Exhaust System with Rain Cap

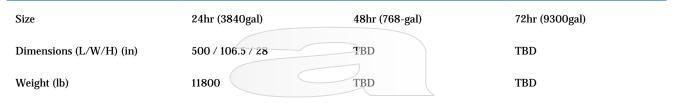
✓ Sound Absorb Louvers

- ✓ Container Lifting Hooks
- ✓ Oil & Coolant Drain Ports
- ✓ Easy Access for Maintenance

Open Skid Gen-Set Dimen	sions	
Length	229.1 in	
Width	88.7 in	
Height	119 in	
Dry Weight	33070 lb	

Enclosed Gen-Set Dimens	sions – ISO Container	Air outlet
Length	480 in	
Width	96 in	
Height	181 in (114 in w/o silencer)	Rada tar Channel Chann
Dry Weight	63935 lb	
Sound Pressure @ 7 meters	84 dB(A)	

### Fuel Tank - UL142 Listed Base Design



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Standard Features & Accessories	Optional Accessories
✓ UL2200 Certification	□ Main Line CB (3 / 4 Poles – 80% / 100% rated)
✓ Heavy Duty Steel Base Frame	Upsize Alternator
✓ PMG w/MX321 AVR	Digital AVR
✓ Engine Jacket Water Heater	□ Anti-condensation Heater
✓ Battery and Battery Rack	□ Sub Base Fuel Tank (UL142 / UL2085)
✓ Battery Charger	Fuel Level Display & Alarm on Controller
✓ Anti Vibration Pads between Engine/Alternator & Base Frame	□ Low / High Fuel Alarms
✓ Critical Grade Silencer Inside Enclosure	Fuel Water Separator Filter
✓ Residential Grade Silencer Set for Open Skid Sets	Auto Fuel Fill Control System
$\checkmark$ Exhaust outlet rain cap and radiator fill cap	Oil Temperature Display on Controller
$\checkmark$ Sound Absorb Foam Material for Enclosure	Manual Speed Adjust Rheostat
✓ Emergency Stop Button	
✓ Oil Drain Valve	Manual Voltage Adjust Rheostat
✓ Coolant Drain Valve	Remote Annunciator Panel
✓ Jacket Water Heater Isolation Valves	Remote Control & Monitoring Panel
	Advanced SMS Messaging
✓ Flex Fuel Lines	Control Panel Heater
✓ Air Filter Restriction Gauge	
✓ Engine Manifold Cover	Battery Disconnect Switch
✓ Turbocharger Cover	Battery Heater
✓ Protection Covers for Rotating Parts	□ Battery Charger 10/20 Amp
✓ Exhaust Insulation Cover	□ Shunt Trip / Aux Contacts
✓ Enclosure DC Light	Spring Anti-vibration Isolators
✓ Operations Manual	Automatic Transfer Panel (ATS)
✓ 24 Months / 2000 hours Limited Standby Warranty	5 Years / 2000 hours Limited Comprehensive Warranty

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