



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-ULM1250
Engine Make	Mitsubishi
Engine Model	S12R-Y2PTAW-1
Alternator Make	Stamford
Control Panel Make & Model	DSE 7320
Frequency & Speed	60Hz, 1800rpm
Enclosure Make & Model	AKSA AUL10/ISO Cont.



Genset Rating

Engine	Alternator	Voltage	Standby Power	Power Factor	Standby Current
S12R-Y2PTAW-1	HCI634K (Wnd-312)	480 / 277V	1150kW	0.8	1729A
	HCI634K (Wnd-312)	240/120V	1020kW	0.8	3067A
	HCI634K (Wnd-07)	600 / 347V	1150kW	0.8	1383A

*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	Mitsubishi
Model	S12R-Y2PTAW-1
Displacement & Cylinders	49.03 L / 12 Cylinders
Engine Speed	1800rpm
Engine Standby Power wo/Fan	1403 kW
Engine Prime Power wo/Fan	1275 kW
Aspiration	Turbo-charged, InterCooler
Compression Ratio	14.5 : 1
Bore / Stroke	170 mm / 180 mm
Break Mean Effective Pressure	276 psi
Mean Piston Speed	10.8 m/s
Allowable Fan Loss Power	50 Kw
Max Regenerative Power Absorption Capacity wo Fan	144kW
Steady State Speed Stability	±0.25 %
Max Over Speed Capacity	2100 rpm
Wet Weight – Engine Only	12249 lb

Electric System

Battery Charge Alternator	24V / 30Ah
Starting Motor Capacity	7.5 kW x 2
Battery Qty, Rating, CCA	4 x 200Ah, 1150CCA

Cooling System

Radiator Cooling System Type	Closed Circuit
Radiator Ambient Temp	> 50 °C
Coolant Capacity, Engine Only (Jacket & Air Cooler)	34.3 gal
Max Coolant Temp at Engine Outlet	208 °F
Thermostat, Start – Fully Open	160– 185 °F

Exhaust System

Exhaust Outlet Size	202 mm
Max Allowable Back Pressure	600 mmH2O
Exhaust Gas Flow	356 m ³ /min

Fuel System

Fuel Injector	Mitsubishi PS6 Type x 2
Max Suction of Feed Pump	75 mmHg
Max Static Head of Return & Leak Pipe	150 mmHg

Air Intake System

Intake Air Flow	135 m ³ /min
Max Intake Air Restriction (Clean Element)	400 mmH2O
Air Filter Type	Dry Paper Element

Fuel Consumption

Standby Power (110%)	103.4 gal/h
Prime Power (100%)	90.6 gal/h
Prime Power (75%)	68.2 gal/h
Prime Power (50%)	46.3 gal/h
Prime Power (25%)	27.5 gal/h

Lubrication System

Total System Capacity	47.6 gal
Sump Capacity Max / Min	40 gal / 28.5 gal
Max Oil Temp	230 °F
Oil Pressure at Rated Speed	71 – 93 psi

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Alternator Data

Manufacturer	Stamford
Standards	BS EN 60034
Control System	PMG
A.V.R.	MX321
Voltage Regulation	± 0.5 %
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

Controller Data

Manufacturer	DSE
Model	7320
Type	Auto Mains Failure Control

Controller Features & Benefits

- Microprocessor controlled
- License free PC 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
- Front panel editing with PIN protection
- Support up to three remote display modules
- Configurable timers and alarms

Battery Charger & Electrical System Data

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

- Integral PLC editor
- 'Protections disabled' feature
- kW & kVAr protection
- Reverse power (kW & kVAr) protection

Jacket Water Heater Data

Manufacturer	Hotstart
Model	CSM10902-000
Input Voltage	240V
Power	9000W

- Power monitoring (kWh, kVAr, kVAh, kVArh)
- Load switching (load shedding and dummy load outputs)
- Unbalanced load protection
- Independent Earth Fault trip
- Fully configurable via DSE Configuration Suite PC Software
- SCADA monitoring via DSE Configuration Suite PC Software

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Enclosure Features

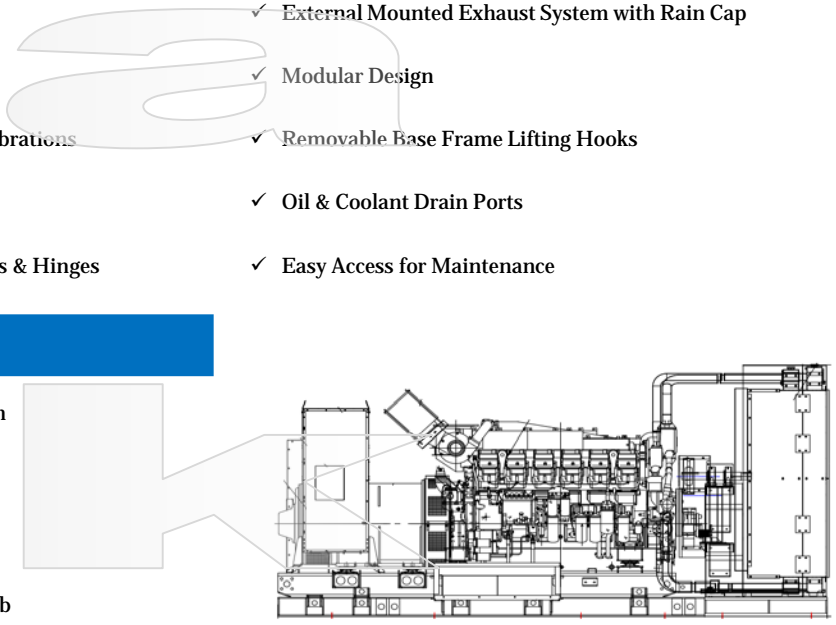
- ✓ Heavy Duty Steel Structure
- ✓ E-Stop on Enclosure
- ✓ Control Panel Eliminated from Engine Vibrations
- ✓ Standard Sound Attenuation Foam
- ✓ Plastic Covered Corrosion Resistant Locks & Hinges

Enclosure Features

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

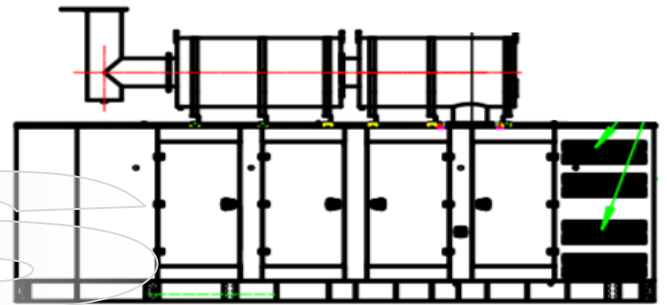
Open Skid Gen-Set Dimensions

Length	210.2 in
Width	89 in
Height	95.9 in
Dry Weight	27558 lb



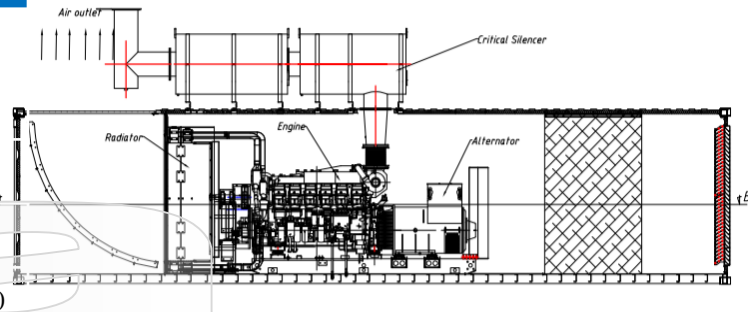
Enclosed Gen-Set Dimensions - Canopy

Length	296 in
Width	89 in
Height	165 in (101 in w/o silencer)
Dry Weight	34000 lb
Sound Pressure @ 7 meters	84 dB(A) (Calculated Value)



Enclosed Gen-Set Dimensions – ISO Container

Length	480 in
Width	96 in
Height	181 in (114 in w/o silencer)
Dry Weight	57800 lb
Sound Pressure @ 7 meters	79 dB(A) (Calculated Value)



Fuel Tank - UL142 Listed Base Design - Canopy Type / ISO Container type

Size	24hr (2500gal)	48hr (5000gal)	24hr (2500gal)	48hr (4960gal)
Dimensions (L/W/H) (in)	320 / 89 / 31	545 / 89 / 36	500 / 106.5 / 28	500 / 106.5 / 34.5
Weight (lb)	7900	12300	9800	12800

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Standard Features & Accessories

- ✓ UL2200 Certification
- ✓ Heavy Duty Steel Base Frame
- ✓ PMG w/MX321 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

Optional Accessories

- Main Line CB (3 / 4 Poles – 80% / 100% rated)
- Upsize Alternator
- Digital 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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