

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	APD1255M-6	Frequency / PF	60Hz, 1800 rpm, 0.8pf
Engine Make & Model	Mitsubishi S12H-PTA	Alternator Make	Stamford
Control Panel Model	DSE 7320	Base Frame / Enclosure	AK96

Genset Rating – 60Hz, 1800rpm, 0.8pf

Engine	Alternator	Voltage	Standby Power	Prime Power	Standby Current
S12H-PTA	HCI634J (Wnd-311)	480 / 277V	1255kVA	1140kVA	1509A
	HCI634J (Wnd-13)	380 / 222V	1255kVA	1140kVA	1906A
	HCI634J (Wnd-311)	220 / 127V	1255kVA	1140kVA	3293A
	HCI634J (Wnd-311)	208 / 120V	1250kVA	1140kVA	3469A

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**



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Engine Data

Manufacturer	Mitsubishi
Model	S12H-PTA
Displacement & Cylinders	37.11 L / 12 Cylinders
Engine Speed	1800rpm
Engine Standby Power wo/Fan	1120 Kw
Engine Prime Power wo/Fan	1020 kW
Aspiration	Turbocharged, After Cooler
Compression Ratio	14 : 1
Bore / Stroke	150 mm / 175 mm
Break Mean Effective Pressure	292 psi
Mean Piston Speed	10.5 m/s
Allowable Fan Loss Power	40 Kw
Max Regenerative Power Absorption Capacity wo Fan	108 Kw
Steady State Speed Stability	± 0.25 %
Max Over Speed Capacity	2000 rpm
Wet Weight – Engine Only	4650 kg

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

Fuel Consumption

Standby Power (110%)	265 l/h
Prime Power (100%)	241 l/h
Prime Power (75%)	180 l/h
Prime Power (50%)	120 l/h
Prime Power (25%)	60 l/h

Electric System

Battery Charge Alternator	24V / 30Ah
Starting Motor Capacity	7.5 kW x 2
Battery Qty, Rating	4 x 150Ah

Cooling System

Radiator Cooling System Type	Closed Circuit
Radiator Ambient Temp	> 50 °C
Coolant Capacity, Engine Only (Jacket & Air Cooler)	244 l
Max Coolant Temp at Engine Outlet	98 °C
Thermostat, Start – Fully Open	71– 85 °C

Exhaust System

Heat Rejection to Exhaust	47141 BTU/min
Max Allowable Back Pressure	600 mmH ₂ O
Exhaust Gas Flow	245 m ³ /min

Air Intake System

Intake Air Flow	93 m ³ /min
Max Intake Air Restriction (Clean Element)	400 mmH ₂ O
Air Filter Type	Dry Paper Element

Lubrication System

Total System Capacity	200 l
Sump Capacity Max / Min	180 l / 150 l
Max Oil Temp	110 °C
Oil Pressure at Rated Speed	71 – 86 psi

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

Battery Charger & Electrical System Data

Manufacturer	AKSA
Model	SmartGen BAC06A
Input Voltage	100V ~ 250V AC
Output Voltage / Current	27,6V DC / 3A

Jacket Water Heater Data

Manufacturer	AKSA
Model	HTR4000
Input Voltage	Based on Genset Voltage
Power	2 x 4000W

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

Multiple date and timer scheduler

Integral PLC editor

'Protections disabled' feature

kW & kVAR protection

Reverse power (kW & kVAR) protection

Power monitoring (kWh, kVAR, kVAh, kVArh)

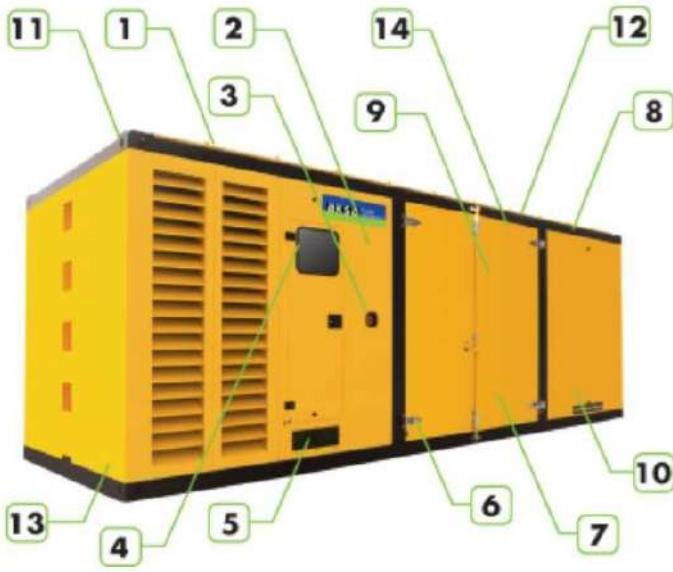
Load switching (load shedding and dummy load outputs)

Unbalanced load protection

Independent Earth Fault trip

Fully configurable via DSE Configuration Suite PC Software

SCADA monitoring via DSE Configuration Suite PC Software



Enclosure Features

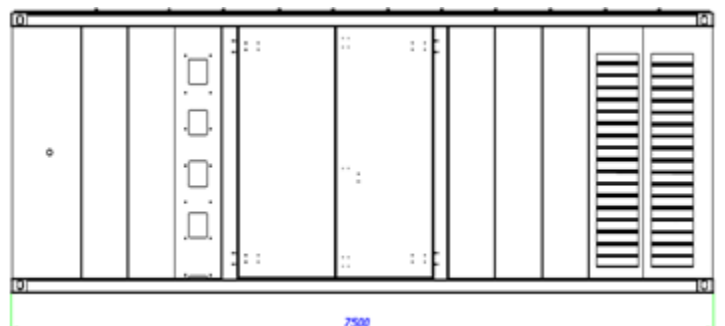
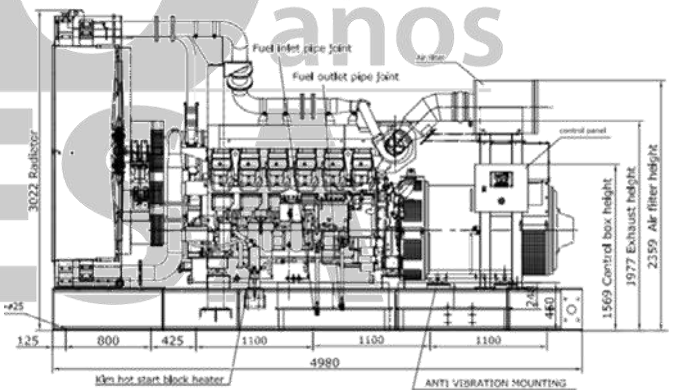
- ✓ Heavy Duty Steel Structure
- ✓ E-Stop on Enclosure
- ✓ Control Panel Eliminated from Engine Vibrations
- ✓ Control Panel Window
- ✓ Plastic Covered Corrosion Resistant Locks & Hinges
- ✓ External Mounted Exhaust System with Rain Cap
- ✓ Coolant Fill Cap
- ✓ Top Lifting Feature
- ✓ Base Fuel Tank
- ✓ Easy Access for Maintenance
- ✓ Sound Absorb High Density Foam

Open Skid Gen-Set Dimensions

Length	4380 mm
Width	1880 mm
Height	2300 mm
Dry Weight	8180 kg
Tank Capacity	-

Enclosed Gen-Set Dimensions

Length	7500 mm
Width	2300 mm
Height	2495 mm
Dry Weight	12250 kg
Tank Capacity	1500 L
Sound Pressure @ 7 meters	83 dBA



Standard Features & Accessories

- ✓ Heavy Duty Steel Base Frame
- ✓ Integral Fuel Tank
- ✓ PMG w/MX321 AVR
- ✓ Engine Jacket Water Heater
- ✓ Battery and Battery Rack
- ✓ Battery Charger
- ✓ Battery Restraint
- ✓ Anti Vibration Pads between Engine/Alternator & Base Frame
- ✓ Residential Grade Silencer Inside Enclosure
- ✓ Industrial Grade Silencer Set for Open Skid Sets
- ✓ Sound Absorb Foam for Enclosure
- ✓ Air Inlet & Outlet Rodent Guards
- ✓ Oil Drain Valve
- ✓ Coolant Drain Valve
- ✓ Flex Fuel Lines
- ✓ Air Filter Restriction Gauge
- ✓ Engine Manifold Cover
- ✓ Turbocharger Cover
- ✓ Protection Covers for Rotating Parts
- ✓ Exhaust Insulation Cover
- ✓ Control Panel Window
- ✓ Operations Manual
- ✓ 24 Months / 2000 hours Limited Standby Warranty

Optional Accessories

- Main Line CB (3 / 4 Poles)
- Anti-condensation Heater
- Stand Alone Bulk Fuel Tank
- 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
- 10A Battery Charger
- Battery Charge Ammeter
- Tool Kit for Maintenance
- Power Plug Outlet Kit
- Automatic Transfer Panel (ATS) – Contactor Design
- Automatic Transfer Panel (ATS) – Changeover Design

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