

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	AVP505-6	Frequency / PF	60Hz, 1800 rpm, 0.8pf
Engine Make & Model	Volvo TAD1344GE	Alternator Make	Stamford
Control Panel Model	DSE 7320	Base Frame / Enclosure	AKSA MS70 / MS85

Genset Rating – 60Hz, 1800rpm, 0.8pf

Engine	Alternator	Voltage	Standby Power	Prime Power	Standby Current
TAD1344GE	HCI444FS (Wnd-311)	480 / 277V	505kVA	459kVA	607A
	HCI444F (Wnd-14)	380 / 222V	505kVA	459kVA	767A
	HCI444F (Wnd-311)	220 / 127V	505kVA	459kVA	1325A
	HCI444F (Wnd-311)	208 / 120V	500kVA	455kVA	1388A

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	Volvo Penta
Model	TAD1344GE
Displacement & Cylinders	12.78 L / 6 Cylinders
Engine Speed	1800rpm
Engine Standby Power	449 Kw
Engine Prime Power	410 kW
Aspiration	Turbocharged
Compression Ratio	18.1 : 1
Bore / Stroke	131 mm / 158 mm
Effective Mean Pressure	2.3 Mpa
Max Combustion Pressure	18.1 Mpa
Total Mass Moment of Inertia	3.43 kgm ²
Friction Power	44 Kw
Wet Weight – Engine Only	1325 kg
Wet Weight – w/Cooling System	1790 kg
Sound Pressure at Rated Power	102.3 dB(A)

Fuel System

Injector Pump Type	Delphi E3
System Supply Flow	130 L/h
System Return Flow	18 L/h
Max Allowable Inlet Fuel Temp	50 °C

Fuel Consumption

Standby Power (110%)	106.7 L/h
Prime Power (100%)	97.0 L/h
Prime Power (75%)	72.4 L/h
Prime Power (50%)	49.4 L/h
Prime Power (25%)	27.6 L/h

Electric System

Engine Cranking Motor	24V
Engine Battery Charge System	Negative Ground
Battery Qty, Rating, CCA	2 x 120Ah

Cooling System

Standard Radiator Core Area	0.8 m ²
Pressure Cap Setting	70 kPa
Coolant Capacity	24 L
Max Top Tank Temperature	107 °C
Thermostat Range	82– 92 °C

Exhaust System

Exhaust Gas Temp	490 °C
Max Allowable Back Pressure	10 kPa
Exhaust Gas Flow	82 m ³ /min

Air Intake System

Air Consumption	33 m ³ /min
Max Intake Air Restriction	5 kPa
Air Filter Type	Dry Paper Element

Lubrication System

Total System Capacity	36 L
Sump Capacity Max / Min	30 L / 19 L
Max Oil Temp	130 °C
Oil Pressure at Rated Speed	370 – 520 kPa
Oil Consumption	0.05 L/h

Alternator Data

Manufacturer	Stamford
Standards	BS EN 60034
Control System	Self Excited
A.V.R.	SX440
Voltage Regulation	± 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	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	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 can be integrated to building management systems Modules
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

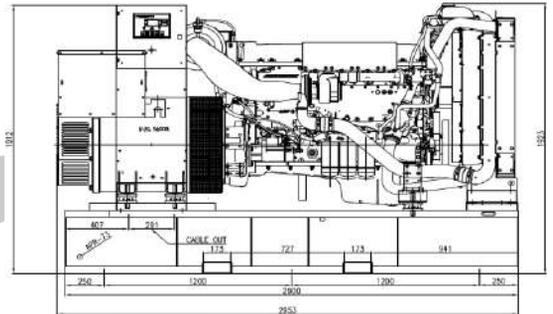
- ✓ Heavy Duty Steel Structure
- ✓ E-Stop on Enclosure
- ✓ Control Panel Eliminated from Engine Vibrations
- ✓ Control Panel Window
- ✓ Plastic Covered Corrosion Resistant Locks & Hinges

Enclosure Features

- ✓ Internally Mounted Exhaust System with Rain Cap
- ✓ Coolant Fill Cap
- ✓ Top Lifting Feature
- ✓ Base Fuel Tank
- ✓ Easy Access for Maintenance

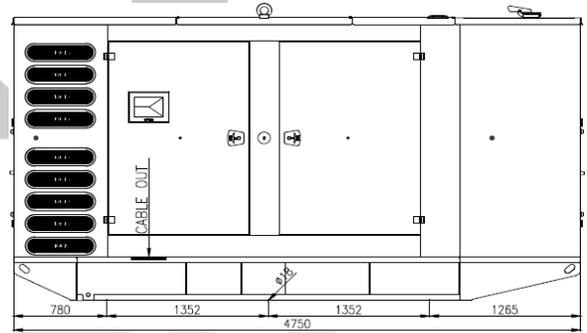
Open Skid Gen-Set Dimensions

Length	2934 mm
Width	1550 mm
Height	1923 mm
Dry Weight	3210 kg
Tank Capacity	700 L



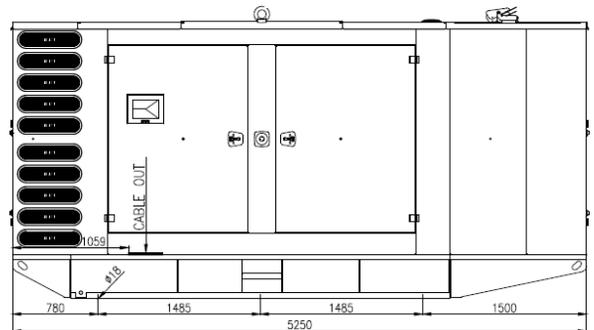
Enclosed Gen-Set Dimensions @480/380V Conf.

Length	4460 mm
Width	1606 mm
Height	2477 mm
Dry Weight	4240 kg
Tank Capacity	700 L
Sound Pressure @ 7 meters	79 dB(A)



Enclosed Gen-Set Dimensions @208/220V Conf.

Length	5250 mm
Width	1605 mm
Height	2656 mm
Dry Weight	5400 kg
Tank Capacity	1000 L
Sound Pressure @ 7 meters	TBD



Standard Features & Accessories

- ✓ Heavy Duty Steel Base Frame
- ✓ Integral Fuel Tank
- ✓ Fuel Drain Plug
- ✓ Control Panel Window
- ✓ Engine Jacket Water Heater
- ✓ Battery and Battery Rack
- ✓ Battery Charger
- ✓ Anti Vibration Pads between Engine/Alternator & Base Frame
- ✓ Residential Grade Silencer Inside Enclosure
- ✓ Industrial Grade Silencer Set for Open Skid Sets
- ✓ Exhaust pipe rain cap and radiator fill cap
- ✓ 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)
- PMG
- Voltage Regulation $\pm 0.5\%$ w/MX321 AVR
- Anti-condensation Heater
- Double Wall Base 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
- Automatic Transfer Panel (ATS) – Contactor Design
- Automatic Transfer Panel (ATS) – Changeover Design

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