

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	AVP631-6	Frequency / PF	60Hz, 1800 rpm, 0.8pf
Engine Make & Model	Volvo TAD1641GE	Alternator Make	Stamford
Control Panel Model	DSE 7320	Base Frame / Enclosure	AKSA MS80 / MS85

Genset Rating – 60Hz, 1800rpm, 0.8pf

Engine	Alternator	Voltage	Standby Power	Prime Power	Standby Current
TAD1641GE	HCI544C (Wnd-311)	480 / 277V	631kVA	574kVA	759A
	HCI544D (Wnd-14)	380 / 222V	631kVA	574kVA	959A
	HCI544D (Wnd-311)	220 / 127V	631kVA	574kVA	1656A
	HCI544D (Wnd-311)	208 / 120V	630kVA	573kVA	1749A

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	TAD1641GE
Displacement & Cylinders	16.12 L / 6 Cylinders
Engine Speed	1800rpm
Engine Standby Power	565 Kw
Engine Prime Power	504 kW
Aspiration	Turbocharged
Compression Ratio	16.5 : 1
Bore / Stroke	144 mm / 165 mm
Effective Mean Pressure	2.3 Mpa
Max Combustion Pressure	18.3 Mpa
Total Mass Moment of Inertia	4.2 kgm ²
Friction Power	53 Kw
Dry Weight – GenPac	1910 kg
Wet Weight – w/Cooling System	2020 kg
Sound Pressure at Rated Power	107.4 dB(A)

Fuel System

Injector Pump Type	Delphi / E1
System Supply Flow	190 L/h
System Return Flow	25 L/h
Max Allowable Inlet Fuel Temp	60 °C

Fuel Consumption

Standby Power (110%)	139.6 L/h
Prime Power (100%)	122.1 L/h
Prime Power (75%)	89.8 L/h
Prime Power (50%)	60.5 L/h
Prime Power (25%)	33.8 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	1.32 m ²
Pressure Cap Setting	75 kPa
Coolant Capacity	60 L
Max Top Tank Temperature	103 °C
Thermostat Range	86– 96 °C

Exhaust System

Exhaust Gas Temp	479 °C
Max Allowable Back Pressure	10 kPa
Exhaust Gas Flow	110.4 m ³ /min

Air Intake System

Air Consumption	45.8 m ³ /min
Max Intake Air Restriction	5 kPa
Air Filter Type	Dry Paper Element

Lubrication System

Total System Capacity	48 L
Sump Capacity Max / Min	42 L / 32 L
Max Oil Temp	130 °C
Oil Pressure at Rated Speed	300 – 650 kPa
Oil Consumption	0.12 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

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	AKSA
Model	SmartGen BACo6A
Input Voltage	100V ~ 250V AC
Output Voltage / Current	27,6V DC / 3A

- Multiple date and timer scheduler
- Integral PLC editor
- 'Protections disabled' feature
- kW & kVAr protection

Jacket Water Heater Data

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

- 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

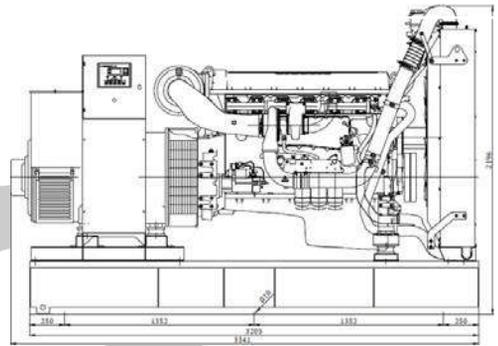
- ✓ Heavy Duty Steel Structure
- ✓ E-Stop on Enclosure
- ✓ Control Panel Eliminated from Engine Vibrations
- ✓ Control Panel Window
- ✓ Plastic Covered Corrosion Resistant Locks & Hinges

Enclosure Features

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

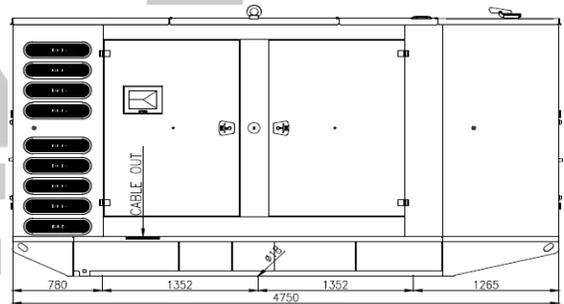
Open Skid Gen-Set Dimensions

Length	3341 mm
Width	1550 mm
Height	2196 mm
Dry Weight	3240 kg
Tank Capacity	850 L



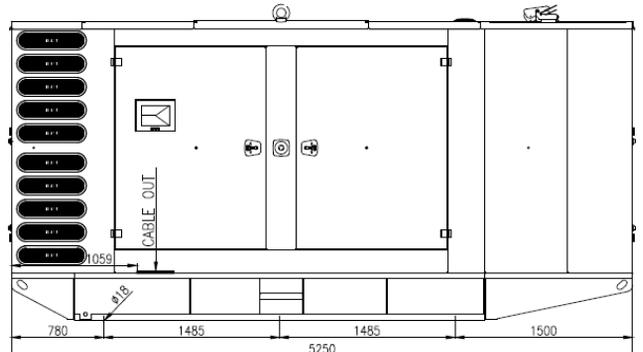
Enclosed Gen-Set Dimensions @480/380V

Length	4750 mm
Width	1606 mm
Height	2615 mm
Dry Weight	4660 kg
Tank Capacity	850 L
Sound Pressure @ 7	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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