

**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	<b>AVP444-6</b>	Frequency / PF	<b>60Hz, 1800 rpm, 0.8pf</b>
Engine Make & Model	<b>Volvo TAD1342GE</b>	Alternator Make	<b>Stamford</b>
Control Panel Model	<b>DSE 7320</b>	Base Frame / Enclosure	<b>AKSA MS70</b>

**Genset Rating – 60Hz, 1800rpm, 0.8pf**

Engine	Alternator	Voltage	Standby Power	Prime Power	Standby Current
TAD1342GE	HCI444ES (Wnd-311)	480 / 277V	444kVA	403kVA	534A
	HCI444F (Wnd-311)	380 / 222V	444kVA	403kVA	675A
	HCI444E (Wnd-311)	220 / 127V	444kVA	403kVA	1165A
	HCI444F (Wnd-311)	208 / 120V	444kVA	403kVA	1232A

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**



**Engine Data**

Manufacturer	Volvo Penta
Model	TAD1342GE
Displacement & Cylinders	12.78 L / 6 Cylinders
Engine Speed	1800rpm
Engine Standby Power	395 Kw
Engine Prime Power	363 kW
Aspiration	Turbocharged
Compression Ratio	18.1 : 1
Bore / Stroke	131 mm / 158 mm
Effective Mean Pressure	2.1 Mpa
Max Combustion Pressure	17.7 Mpa
Total Mass Moment of Inertia	3.43 kgm <sup>2</sup>
Friction Power	44 Kw
Wet Weight – Engine Only	1325 kg
Wet Weight – w/Cooling System	1790 kg
Sound Pressure at Rated Power	98.8 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%)	93.4 L/h
Prime Power (100%)	85.8 L/h
Prime Power (75%)	64.1 L/h
Prime Power (50%)	44.2 L/h
Prime Power (25%)	25.3 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 <sup>2</sup>
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	481 °C
Max Allowable Back Pressure	10 kPa
Exhaust Gas Flow	69.5 m <sup>3</sup> /min

**Air Intake System**

Air Consumption	28.7 m <sup>3</sup> /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

**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**

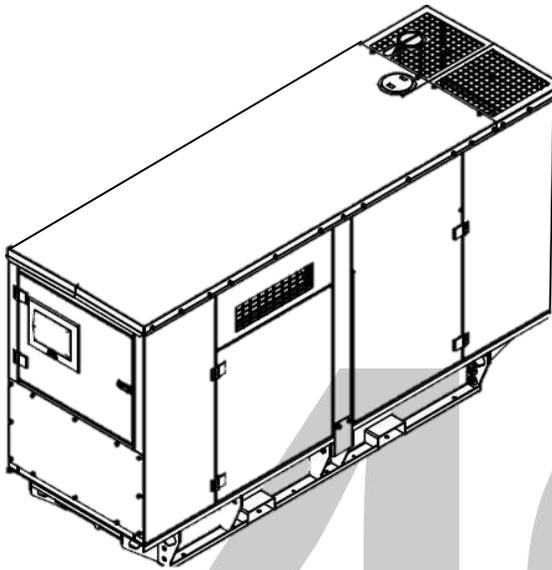
Manufacturer	AKSA
Model	SmartGen BACo6A
Input Voltage	100V ~ 250V AC
Output Voltage / Current	27,6V DC / 3A

- 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**

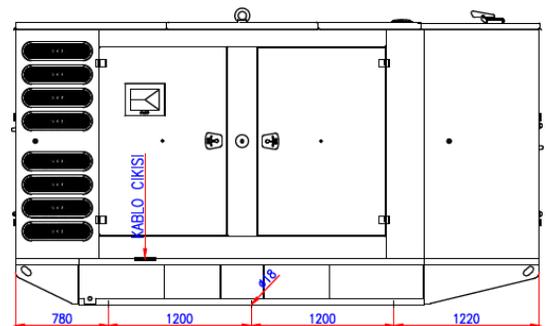
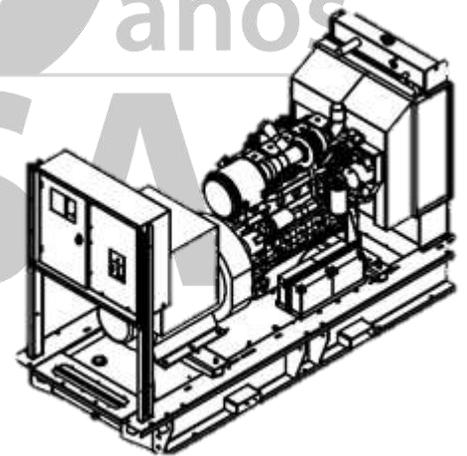
- ✓ Heavy Duty Steel Structure
- ✓ E-Stop on Enclosure
- ✓ Control Panel Eliminated from Engine Vibrations
- ✓ Control Panel Window
- ✓ Plastic Covered Corrosion Resistant Locks & Hinges
- ✓ Internally Mounted Exhaust System with Rain Cap
- ✓ Coolant Fill Cap
- ✓ Top Lifting Feature
- ✓ Base Fuel Tank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

**Open Skid Gen-Set Dimensions**

Length	2900 mm
Width	1550 mm
Height	1923 mm
Dry Weight	2990 kg
Tank Capacity	700 L

**Enclosed Gen-Set Dimensions**

Length	4460 mm
Width	1606 mm
Height	2477 mm
Dry Weight	3980 kg
Tank Capacity	700 L
Sound Pressure @ 7 meters	78 dB(A)



**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

\*Manufacturer reserves the right to make changes in model, technical specifications, color, equipment and accessories without prior notice.

**SEDE PRINCIPAL:**

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