

**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>AC754-6</b>	Frequency / PF	<b>60Hz, 1800 rpm, 0.8pf</b>
Engine Make & Model	<b>Cummins VTA28G5</b>	Alternator Make	<b>Stamford</b>
Control Panel Model	<b>DSE 7320</b>	Base Frame / Enclosure	<b>AKSA MS85 / AK90</b>

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

Engine	Alternator	Voltage	Standby Power	Prime Power	Standby Current
VTA28G5	HCI544E (Wnd-311)	480 / 277V	754kVA	680kVA	906A
	HCI544E (Wnd-14)	380 / 222V	754kVA	680kVA	1145A
	HCI544F (Wnd-311)	220 / 127V	754kVA	680kVA	1978A
	HCI544F (Wnd-311)	208 / 120V	754kVA	680kVA	2092A

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	Cummins
Model	VTA28G5
Displacement & Cylinders	28 L / 12 Cylinders
Engine Speed	1800rpm
Engine Standby Power	671 Kw
Engine Prime Power	608 kW
Aspiration	Turbocharged&Aftercooled
Compression Ratio	13.1 : 1
Bore / Stroke	137 mm / 169 mm
Break Mean Effective Pressure	1599 kPa
Piston Speed	9.1 m/s
Friction Power	78 kWm
Radiated Heat to Ambient	105 kWm
Steady State Stability	0.25 %
Dry Weight – fan to flywheel	2900 kg
Exhaust Noise 1m @Rated Power	112 dB(A)

## Electric System

Engine Cranking Motor	24V
Engine Battery Charge System	Negative Ground
Battery Qty, Rating, CCA	2 x 150Ah

## Cooling System

Coolant Capacity (Engine Only)	80 L
Minimum Pressure Cap	69 kPa
Max Coolant Friction Head External to Engine	69 kPa
Max Top Tank Temperature	104 °C
Thermostat Range	82– 93 °C

## Exhaust System

Exhaust Gas Temp	502 °C
Max Allowable Back Pressure	76 mmHg
Exhaust Gas Flow	5040 cfm

## Fuel System

Type Injection System	Direct Injection
Max Fuel Flow	337 L/h
Max Restriction at PT Pump	102 mmHg Clean Filter
Max Allowable Head on Injector Return Line	165 mmHg

## Air Intake System

Intake Air Flow	2280 cfm
Max Intake Air Restriction	635 mmH2O Dirty Element 254 mmH2O Clean Element
Air Filter Type	Dry Paper Element

## Fuel Consumption

Standby Power (110%)	173 liter / hour
Prime Power (100%)	154 liter / hour
Prime Power (75%)	118 liter / hour
Prime Power (50%)	84 liter / hour
Prime Power (25%)	50 liter / hour

## Lubrication System

Total System Capacity	83 L
Sump Capacity Max / Min	68 L / 61 L
Max Oil Temp	121 °C
Oil Pressure at Rated Speed	345 – 621 kPa

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**Alternator Data**

Manufacturer	Stamford
Standards	BS EN 60034
Control System	Self Excited
A.V.R.	AS440
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
- Multiple date and timer scheduler

**Battery Charger & Electrical System Data**

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

- Integral PLC editor
- 'Protections disabled' feature
- kW & kVAr protection
- Reverse power (kW & kVAr) protection
- Power monitoring (kWh, kVAr, kVAh, kVArh)

**Jacket Water Heater Data**

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

- 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**

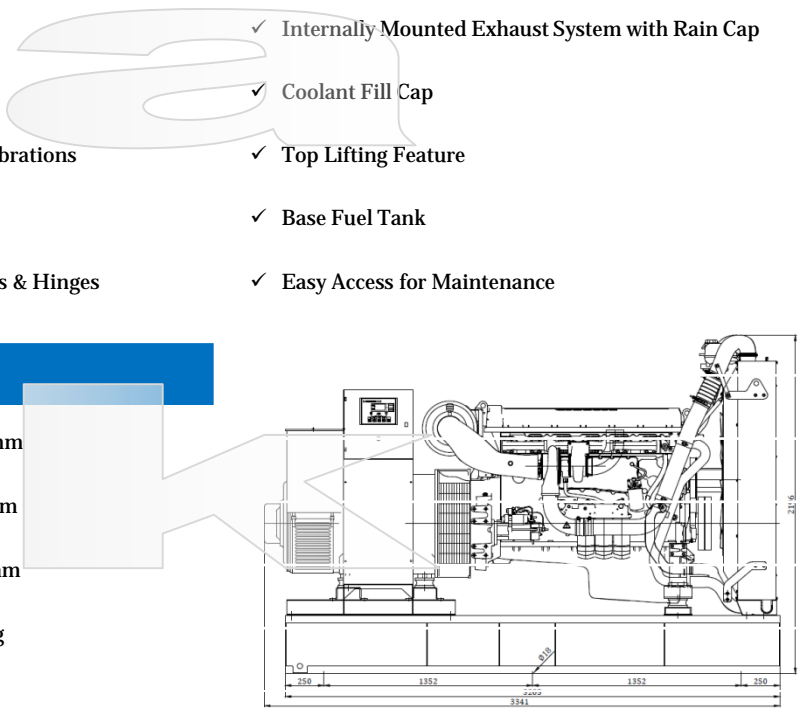
- ✓ Heavy Duty Steel Structure
- ✓ E-Stop on Enclosure
- ✓ Control Panel Eliminated from Engine Vibrations
- ✓ Control Panel Window
- ✓ Plastic Covered Corrosion Resistant Locks & Hinges

**Enclosure Features**

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

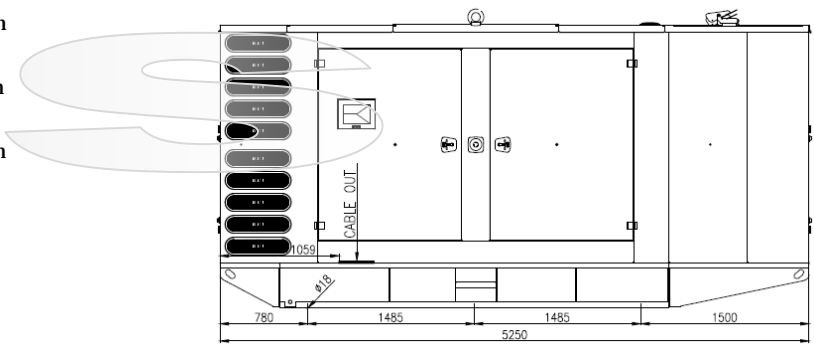
**Open Skid Gen-Set Dimensions**

Length	3800 mm
Width	1550 mm
Height	2270 mm
Dry Weight	5470 kg
Tank Capacity	1000 L



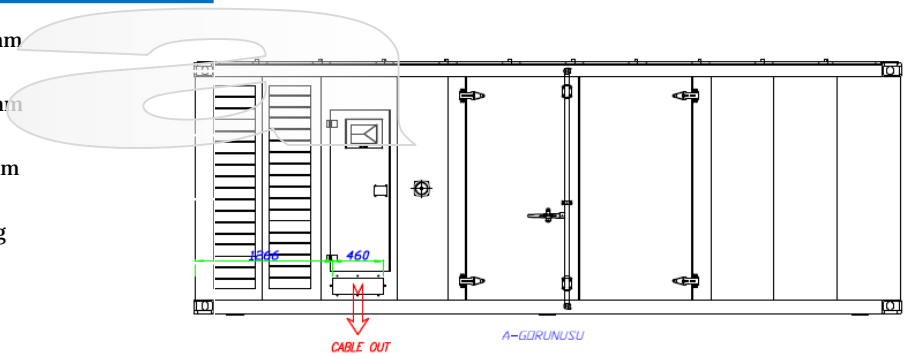
**Enclosed Gen-Set Dimensions @480&380v Conf.**

Length	5250 mm
Width	1605 mm
Height	2656 mm
Dry Weight	7030 kg
Tank Capacity	1000 L
Sound Pressure @ 7 meters	78 dB(A)



**Enclosed Gen-Set Dimensions @208&220v Conf.**

Length	6500 mm
Width	2200 mm
Height	2353 mm
Dry Weight	7820 kg
Tank Capacity	1100 L
Sound Pressure @ 7 meters	TBD



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**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
- ✓ Radiator fill cap on enclosure
- ✓ 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)
- PMG
- Voltage Regulation  $\pm 0.5\%$  w/MX321 AVR
- 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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