

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 | AP563-6 | Frequency / PF | 60Hz, 1800 rpm, 0.8pf |
| Engine Make & Model | Perkins 2506A-E15TAG1 | Alternator Make | Stamford |
| Control Panel Model | DSE 7320 | Base Frame / Enclosure | AKSA MS80 / AK90 |

Genset Rating – 60Hz, 1800rpm, 0.8pf

| Engine | Alternator | Voltage | Standby Power | Prime Power | Standby Current |
|---------------|------------|------------|---------------|-------------|-----------------|
| 2506A-E15TAG1 | HCI544C | 480 / 277V | 563kVA | 512.5kVA | 677A |
| | HCI544D | 380 / 222V | 563kVA | 512.5kVA | 855A |
| | HCI544C | 220 / 127V | 563kVA | 512.5kVA | 1477A |
| | HCI544C | 208 / 120V | 563kVA | 512.5kVA | 1562A |

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**



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


Engine Data

| | |
|----------------------------------|---|
| Manufacturer | Perkins |
| Model | 2506A-E15TAG1 |
| Displacement & Cylinders | 15.2 L / 6 Cylinders |
| Engine Speed | 1800rpm |
| Engine Standby Power - Net | 490 Kw |
| Engine Prime Power - Net | 435 Kw |
| Aspiration | Air to Air Aftercooled, Turbocharged |
| Compression Ratio | 16 : 1 |
| Bore / Stroke | 137 mm / 171 mm |
| Break Mean Effective Pressure | 2284 kPa |
| Engine Coolant Flow | 7.2 l/sec |
| Combustion Air Flow | 38 m ³ /min |
| Exhaust Gas Flow | 105.3 m ³ /min |
| Exhaust Gas Temperature | 550 °C |
| Overall Thermal Efficiency | 43 % |
| Speed Variation at Constant Load | ±0.25 % |

Fuel System

| | |
|--|------------------------|
| Injection System | MEUI |
| Governor Type | Electronic |
| Lift Pump Type | Gear |
| Fuel Filter Spacing Primary/Secondary | 10 microns / 2 microns |

Fuel Consumption

| | |
|----------------------|---------|
| Standby Power (110%) | 116 L/h |
| Prime Power (100%) | 102 L/h |
| Prime Power (75%) | 78 L/h |
| Prime Power (50%) | 53 L/h |

Electric System

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

Cooling System

| | |
|-------------------------------|----------------------|
| Radiator Face Area | 1,238 m ² |
| Fan Number of Plates/Material | 9 / B3WG6 or PA6GF30 |
| Total System Capacity | 58 L |
| Max Top Tank Temperature | 107 °C |
| Thermostat Range | 88 – 98 °C |

Exhaust System

| | |
|-----------------------|---------|
| Maximum Back Pressure | 6.8 kPa |
| Exhaust Outlet Size | 127 mm |

Lubrication System

| | |
|---|----------------------|
| Total System Capacity | 62 L |
| Minimum Capacity | 45 L |
| Max Oil Temp | 114 °C |
| Lubricating Oil Specifications | API-CH4 / SAE 15W-40 |
| Oil Consumption at full load as a % of fuel consumption | 0.1 % |

Energy Balance

| | |
|--------------------------------------|---------|
| Energy in fuel | 1175 Kw |
| Energy in power output – gross | 514 kW |
| Energy to cooling fan & restrictions | 24.4 kW |
| Energy to coolant and oil | 156 kW |
| Energy to exhaust | 350 kW |

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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 | HTR3000 |
| Input Voltage | Based on Gen Voltage |
| Power | 3000W |

- 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

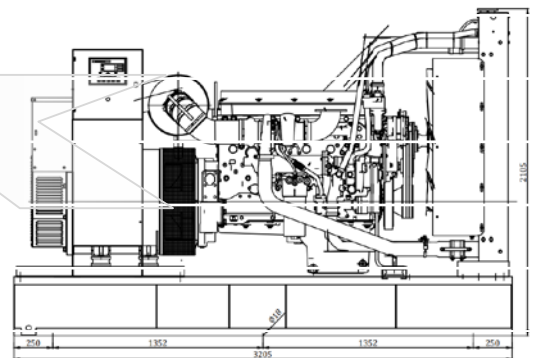
- ✓ Heavy Duty Steel Structure
- ✓ E-Stop on Enclosure
- ✓ Control Panel Eliminated from Engine Vibrations
- ✓ Control Panel Window
- ✓ Plastic Covered Corrosion Resistant Locks & Hinges

Enclosure Features

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

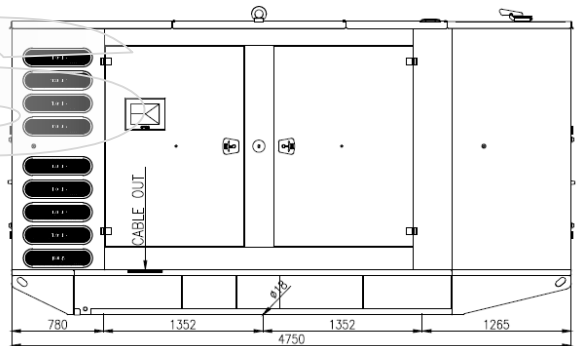
Open Skid Gen-Set Dimensions

| | |
|---------------|---------|
| Length | 3265 mm |
| Width | 1550 mm |
| Height | 2105 mm |
| Dry Weight | 3650 kg |
| Tank Capacity | 850 L |



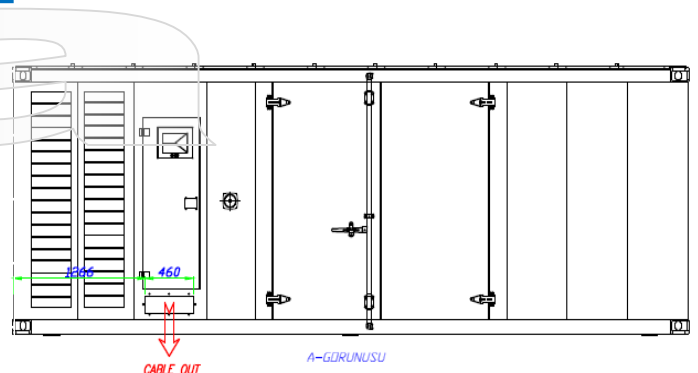
Enclosed Gen-Set Dimensions @480/380v Conf.

| | |
|---------------------------|---------|
| Length | 4810 mm |
| Width | 1610 mm |
| Height | 2620 mm |
| Dry Weight | 4800 kg |
| Tank Capacity | 850 L |
| Sound Pressure @ 7 meters | TBA |



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

| | |
|---------------------------|---------|
| Length | 6500 mm |
| Width | 2200 mm |
| Height | 2353 mm |
| Dry Weight | 7600 kg |
| Tank Capacity | 1500 L |
| Sound Pressure @ 7 meters | TBA |



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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
- ✓ 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
- 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
- Automatic Transfer Panel (ATS) – Contactor Design
- Automatic Transfer Panel (ATS) – Changeover Design

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