



INTRODUCTION

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.

Power (kVA)

60 Hz

VOLTAGE	PHASE	Pf	STANDBY RATING (ESP)		Standby Ampere	PRIME RATING (PRP)		Prime Ampere
			kW	kVA		kW	kVA	
240/120	1	1	100	100	417	91	91	379
208/120	3	0,8	110	137,5	382	100	125	347
480/277	3	0,8	110	137,5	165	100	125	150

STANDBY 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. Derating may be required for conditions outside of the test conditions.

GENERAL CHARACTERISTICS

Frequency (Hz)	60
Engine Make and Model	JOHN DEERE 4045CG440 (Tier-4)
Control Panel Model	DSE 7320



ENGINE SPECIFICATIONS

Engine Model	4045CG440
Max. power @ rated rpm; kWm (BHP)	107 (143)
Aspiration & Cooling	Turbo Charged Air to Air After Cooled
Bore; in. (mm)	4.2 (106)
Compression Ratio	17.2:1
Rated rpm	1800

ENGINE ELECTRICAL SYSTEM

Alternator Rating; (amp)	90
Starter motor power; (kW)	2.7
Starter motor rated voltage; (dc)	12
Battery quantity x rating	1 x 85Ah

FUEL SYSTEM

Type of injection	Direct
Fuel injection pump	Denso HP3
Fuel prime pump	Electric
Max. fuel flow; kg/hr (lb/hr)	43/95
Fuel filter & water separator	Available

FUEL CONSUMPTION

110% Load (Standby) (gal/h)	6.9
100% Load (Prime) (gal/h)	6.3
75% Load (Prime) (gal/h)	4.6
50% Load (Prime) (gal/h)	3.4

EXHAUST SYSTEM

Exhaust gas flow; (ft ³ /min)	537
Max. back pressure; (in. H ₂ O)	49
Max. exhaust gas temp in manifold; (°F)	882


COOLING SYSTEM

Radiator ambient temp; °C (°F)	TBD
Coolant capacity; L (gal)	43.5(11.5)
Thermostat operation range; °F	185-207
Combustion air flow; ft ³ /min	230
Engine coolant flow; L/min (gal/min)	160(42)
Cooling fan air flow;	152.61 m ³ /min - 5446 cfm

Air filter	Paper Element
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LUBRICATION SYSTEM

Oil cooler	Water cooled
Oil filter	Spin on, replaceable
Oil temp (continuous operation);	280

ALTERNATOR CHARACTERISTICS

Model	UCI 274E - 60Hz
Exciter type	Self Excited
Rotor	Single bearing, flexible disc
	12
Insulation	Class H
Max. over-speed; rev/min	2250

OPTIONAL 4 POSITION VSS (Standard Oversized Alternator kW Rating at 1800rpm/60Hz)

240/120 3ph 208/120V - 3ph - 0.8pf	181 kW
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GEN.SET CANOPY DIMENSIONS

WIDTH (in)	45.51
DRY WEIGHT (lb)	6173
GENSET SOUND LEVEL (dBA@23ft)	TBD



1. Steel structures.
2. Emergency stop push button.
3. Control panel is located at the rear side of the generator set.
4. Corrosion-resistant locks and hinges.
5. Oil could be drained via valve and a hose
6. Exhaust system in the canopy.
7. Special large access doors for easy maintenance
8. In front and back side special large access doors for easy maintenance
9. Base frame -fuel tank.
10. Lifting points similar to ISO container , located on each top corner of the canopy.
11. The cap on the canopy provides easy access to radiator cap.
12. Sound proofing materials

BASE-FRAME ENCLOSURE

- The complete gen-set is mounted entirely on a heavy duty base frame with an integral double wall fuel tank.
- Anti vibration isolators are installed between engine/alternator supports and the base frame.
- All enclosure parts are designed with module principles without welding
- Enclosure has four doors on each side for easy serviceability and back door for control system.
- Exhaust silencer is protected (Coated) against environmental outdoor conditions and is internally mounted within enclosure.
- Exhaust pipe thermally insulated on engine compartment.
- All metal enclosure parts are painted by electrostatic polyester powder paint.
- Fuel filling cap is within the Enclosure, and reachable through lockable door.
- Emergency stop switch externally mounted on enclosure.
- Components installed in sheet steel enclosure.
- Phosphate chemical, pre-coating of steel provides corrosion resistant surface
- Polyester composite powder topcoat forms high gloss and extremely durable finish
- Lockable hinged panel door provides for easy component access

CONTROL PANEL

Control Module	DSE
Control Module Model	DSE 7320
Communication Ports	MODBUS



1. Menu navigation buttons
2. Close mains button
3. Main Status and instrumentation display
4. Alarm LED's
5. Close generator button
6. Status LED's
7. Operation selecting buttons

Manufacturer reserves the right to make change in the model, technical specifications, color, equipment, accessories and images without prior notice. (12.03.2020)



GENERATING SET CONTROL UNIT

The DSE 7320 includes the additional capability of being able to monitor a mains (utility) supply and is therefore suitable for controlling a standby generating set in conjunction with an automatic transfer switch.

The DSE7320 also indicates operational status and fault conditions, automatically shutting down the generating set and indicating faults by means of its LCD display on the front panel.

- UL recognized, NFPA110 Level 1 compatible
- LCD text display, key menu navigation and front panel editing
- Off/Manual/Auto model switch
- Two wire starting/stopping in Auto mode
- Engine exerciser
- IP65 front panel rating with supplied sealing gasket
- Configurable 8 inputs, 6 analogue inputs, 6 DC outputs with expansion capability
- Real time clock provides accurate event logging
- Fully configurable via DSE Configuration Suite PC software
- Remote SCADA monitoring and BMS integration features
- License free PC software

- Microprocessor controlled
- 132 x 64 pixel LCD display makes information easy to read
- Front panel programming and also via PC software
- Soft touch membrane keypad and five key menu navigation
- Remote communications via RS232, RS485 and ethernet.
- Event logging (50) showing date and time
- Multiple date and time engine exercise mode and maintenance scheduler
- Coolant heater control.
- Controls; stop, manuel, auto, test, start, mute lamb test/transfer to generator, transfer to mains, menu navigation.

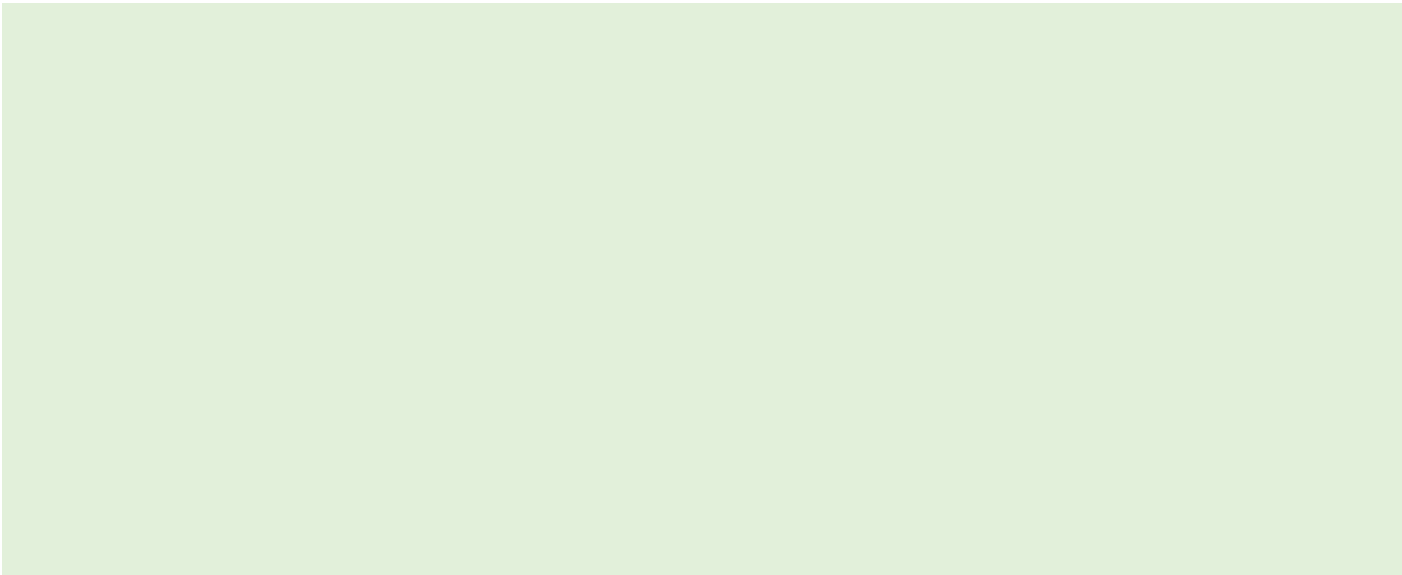
ENGINE	- Frequency	- Under/over generator frequency	- kW over load
- Engine speed	- Earth current	- Under/over generator voltage	- Negative phase sequence
- Oil pressure	- kW	- ECU warning	- Loss of speed signal
- Coolant temperature	- Pf	ELECTRICAL TRIP	SHUT DOWNS
- Run time Battery volts	- kVAr	- Earth fault	- Fail to start
- Engine maintenance due	- kWh, kVAh, kVArh	- kW over load	- Emergency stop
MAINS	- Phase sequence	- Generator over current	- Low oil pressure
- Voltage (L-L, L-N)	PRE-ALARMS	- Negative phase sequence	- High engine temperature
- Frequency	- Low oil pressure	WARNING	- Low coolant level
GENERATOR	- High engine temperature	- Charge failure	- Over /Under speed
- Voltage (L-L, L-N)	- Low engine temperature	- Battery under voltage	- Under/over generator frequency
- Current (L1-L2-L3)	- Over /Under speed	- Fail to stop	- Under/over generator voltage
		- Low fuel level (opt.)	- Oil pressure sensor open
			- Phase rotation



- High oil temperature shut down
- Low fuel level shut down
- Low fuel level alarm
- High fuel level alarm
- EXPANSION MODULES
- Editorial LED module (2548)
- Expansion relay module (2157)
- Expansion input module (2130)

- Electrical Safety / EMC compatibility
- BS EN 60950 Electrical business equipment
- BS EN 61000-6-2 EMC immunity standard
- BS EN 61000-6-4 EMC emission standard

STANDARD SPECIFICATIONS



Convenience Panel Accessories

- (2) Two 20A, 120V GFCI receptacles and breakers
- (3) Three 50A, 240V twist lock receptacles and breakers
- 5-15A, 125V inlet receptacles for battery charger and water heater
- Two wire remote start station
- Generator set voltage adjust rheostat
- (5) 400A rated, stud type quick connect cam-locks

Standard Features & Accessories

- Trailer w/spare tire and tool box
- Sound Attenuated Steel Enclosure
- Heavy Duty Steel Base-frame
- Exhaust system with Doc+SCR
- Flex Fuel Lines

- Oil Drain Valve & Extension
- Convenience Panel
- Voltage Selector Switch – 3 position
- Emergency Stop Switch
- Battery, Battery Rack & Cables
- Battery Charger (Input: 196-264V, Output: 27.6V 5A or 13.8V 5A)
- Main Line CB
- Jacket Water Heater (120 VAC, 1000 W)
- Operations Manual
- 1 Year / 2000 hours Limited Warranty

Voltage Selector Switch

- Three positions at 480/277V, 208/120V - 3ph & 240/120 - 1ph
- Product of Salzer or Kraus&Naimer



Trailer

- DOT approved 10,000lbs heavy duty dual axle trailer
- Spring axles w/electric brakes
- Breakaway kit with charger
- 5000lbs front jack and rear stabilizer jacks
- 7 pin trailer plug
- Tool box and spare tire

Circuit Breaker

- 500Amp capacity main line circuit breaker
- Shunt trip controller by generator set control

AKSA CERTIFICATES

- CE

- 2000/14/EC

OPTIONAL ACCESSORIES

- Upsized Alternator
- PMG Excitation
- Alternator Anti-condensation Heater
- 4 Position VSS
- Fuel Level Monitoring on Controller & High Fuel Alarm
- Fuel Line Check Valve
- Oil Temperature Gauge
- Oil Heater
- Battery Charger 10Amp
- Battery Heater Blanket
- Main Line CB (100% rated)
- Remote Monitoring and Control
- Remote Annunciator

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