

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.

Alternator (125 °C Rise)	Voltage	Ph	Pf	Hz	Natural Gas Stand-by Ratings		LP Gas Stand-by Ratings	
					kW/kVA	Amp	kW/kVA	Amp
PI144K Winding #311	480/277V	3	0.8	60	40/50	60	40/50	60
	440/254V	3	0.8	60	40/50	66	40/50	66
	240/139V	3	0.8	60	40/50	120	40/50	120
	240/120V	3	0.8	60	40/50	120	40/50	120
PI144K Winding #06	208/120V	3	0.8	60	40/50	140	40/50	140
	240/120V	1	1	60	40/40	167	40/40	167

Rating Definition

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

U.S.EPA

EPA Certified for Emergency Stationary Applications.



The Generator set is **UL2200 listed.**



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 **ISO14001:2004** standards.



The Generator meets **NFPA70, 99, 110, 37** Level 1 when equipped with the necessary accessories and installed per NFPA standards.

Standard Features

AKSA Power Generation provides **single source responsibility** for the generator set & accessories.

The generator set, with its components, are **prototype tested** and **production tested** according to the UL test program.

PSI Industrial Powertrain four cycle engine delivers low emission, reliable power, fuel efficiency and fast response to load changes.

Newage Stamford industrial generators meet the requirements of BS EN 60034 and the relevant sections of other international standards such as BS5000, VDE0530, NEMA MG1-32, IEC34, CSA C22.2-100, AS1359.

Non-proprietary NFPA110 compliant control system provides total gen-set system integrated control, protections, metering, automatic starting/stopping with options of remote control, remote display or remote annunciation.

Heavy duty base frame with integral pad **vibration isolators** eliminates the need for under unit spring vibration isolators.

Engine Data

Manufacturer	PSI
Model, type	GM 4.3L V-Type 4 Cycle
Cylinders	6
Aspiration	Naturally Aspired
Bore; in. (mm)	4 (101.6)
Stroke; in. (mm)	3.48 (88)
Total displacement; L (in ³)	4.3 (262)
Compression ratio	9.05:1
Rated rpm	1800
Governor type	Electronic
Frequency regulation, steady state	±0.5%
Air cleaner type	Dry

Engine Power Rating

Intermittent Power Rating @ Flywheel	
NG; kW (HP)	49.55 (66.45)
LP ; kW (HP)	53.24 (71.39)

Engine Electrical System

Charging alternator	Negative Ground
Voltage; (dc)	12
Ampere rating	54
Starter motor rated voltage; (DC)	12
Battery quantity x rating & CCA	1 x 54Ah, 410

Fuel System

Fuel type	NG, LPG / Dual Fuel
Min NG supply pipe size	1-1/4" NPT
Min LPG supply pipe size	3/4"
Maximum EPR rated pressure; psi (kPa)	1.0 (6.9)
Max pressure to EPR; inH2O (kPa)	11.0 (2.7)
Min pressure to EPR; inH2O (kPa)	7.0 (1.7)

Fuel Composition Limits

	Natural Gas		LP Gas	
	Low	High	Low	High
Methane	92	94.5	0	1.23
Ethane	1	4.5	2.22	10.12
Propane	0.09	0.44	87.68	96.7
Lower heating value; (BTU/ft ³)				

Exhaust System

Type	Air cooled manifold
Exhaust manifold type	Dry
Cont. rating catalyst configuration	Single – 5.66" x 6"
Max. allowable back pressure; in. HG (kPa)	3 (10.2)
Exhaust volumetric flow at rated power ; cfm	10.25 (361.9)

Cooling System

Radiator ambient temp; °C (°F)	50 (122)
Coolant capacity, engine only; L(qt.)	7.3 (7.75)
Heat rejected to cooling water; btu/min	2220
Cranking temperature, °F (°C)	160 (71)
Full open temperature, °F (°C)	185 (85)
Water pump type	Centrifugal
Fan diameter including blades, mm(in.)	533 (21)
Fan, kWm (HP)	1.5 (2.0)
Combustion air required, cfm (m ³ /min)	112.10 (3.17)
Max. allowable intake air restriction	
Air Cleaner – clean; inH2O (kPa)	3 (1.49)
Air Cleaner – dirty; inH2O (kPa)	13 (3.24)

Lubrication System

Type	Fuel pressure
Oil pan capacity; L (qt.)	4.5 (4.25)
Oil filter; qt, type	1, Cartridge
Oil specification	SAE 5W-30 API
	Rating SM or Newer
Max. allowable oil temp; °F (°C)	250 (121)

Fuel Consumption-standby ratings; m³/hr – (cfh)

	Natural Gas	LP Gas
100% Load	16.5 (584)	6.9 (242)
75% Load	13.8 (486)	5.4 (191)
50% Load	10.2 (360)	4.0 (141)
25% Load	7.7 (272)	2.9 (101)

Nominal fuel rating: Natural gas, 1000 Btu/ft³
LP vapor, 2500 Btu/ft³

LP vapor conversion factors: 8.58 ft.³ = 1 lb.
 0.535 m³ = 1 kg.
 36.39 ft.³ = 1 gal.

Alternator Data

Manufacturer	Stamford
Model	
Winding #311	PI144K
Winding #06 – Dedicated 1 phase	PI144K
Design	4 Pole, drip proof rotating field
Exciter type	Brushless, self excited EBS option is available
Stator	2/3 winding pitch
Rotor	Double bearing, flexible disc
Leads	
Winding #311	12
Winding #06	4
Voltage regulator	Solid state, Volts/Hz
Voltage regulation	
Self excited	1%
Insulation	Class H
Temp. rise @ 40°C ambient	125°C
Alternator Cooling	Direct drive Centrifugal blower
Cooling air; m ³ /min	0.165
Waveform distortion	No load < 1.5% Non-distorting balanced linear load <5%
Max. over-speed; rev/min	2250
Telephone influence factor (TIF)	<50
Telephone harmonic factor (THF)	<2%
Sustained short circuit current 10sec with EBS fitted; (amp)	
Winding #311 – Star	236
Winding #311 – Parallel Star	472
Winding #06 – Double Delta	743

Locked rotor kVA (skVA) @30% voltage dip

	Self Excited
480/277V - 3ph	130
208/120V - 3ph	97
240/120V - 1ph	70

Control System



DSE7320 is an advanced control system, suitable for a wide variety of single, diesel or gas, gen-set applications. Monitoring and an extensive number of engine parameters, the module displays warnings, shutdowns and engine status information on the back lit LCD screen, illuminated LEDs, remote PC and via SMS text alerts (with external modem).

- 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 9 inputs, 8 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

Protections

- Gen. Voltage - under/over
- Gen. Frequency - under/over
- Engine Speed - under/over
- Engine Oil pressure - low
- Engine Temp. - low/high
- Battery Voltage - low/high
- Weak battery
- Fail to start/stop
- Charge fail
- Over current & load(kW/kVAr)
- Unbalanced load
- Independent Earth Fault
- Reverse Power
- Fuel level - low/high (optional)
- Loss of speed signal

Instruments

- Gen. Voltage (L-L/L-N)
- Gen Frequency
- Engine Speed
- Oil Pressure
- Water Temperature
- Battery Voltage
- Run time
- Engine maintenance due
- Phase sequence
- Pwr. monitoring (kWh / kVAh / kVArh)
- Power (kW/kVA/kVAr)
- Power factor
- Gen. Current (L1-L2-L3)
- Earth current

Standard Features & Accessories

- UL2200 Listing
- Sound Attenuated Steel Enclosure
- Heavy Duty Steel Base-frame
- Anti-vibration pads
- Residential Grade Silencer Inside Enclosure
- Flex Fuel Lines
- Oil Drain Valve & Extension
- Emergency Stop Switch
- Battery, Battery Rack & Cables
- Battery Charger (4 Amp)
- Main Line CB (80% rated)
- Jacket Water Heater (500W)
- Operations Manual
- 2 Years / 2000hours Limited Warranty

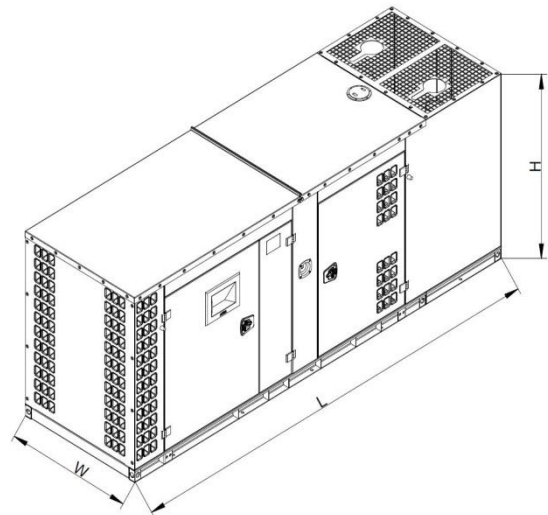
Optional Accessories

- Upsized Alternator
- Alternator Anti-condensation Heater
- Manual Speed Adjust
- Spring Type Anti-vibration pads
- Critical Grade Silencer
- Oil Temperature Gauge
- Remote Emergency Stop Switch
- Battery Restraint
- Battery Charger 10/20Amp per NFPA110
- Main Line CB (100% rated)
- Main Line CB Shunt Trip
- Remote Serial Display Panel
- Remote Annunciation Panel (8/16/24 lights)
- 5 Years / 2000hours Limited Warranty

Dimensions & Weight & Sound Level

Gen-set Without Fuel Tank

	Open Type	Enclosed Type Level-1
L (in.)	72	89
W (in.)	39	39
H (in.)	38	67
Weight (lb)	1460	2500



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



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