

Specification & Application Data

Rating Range – 60Hz Operation

Standby	kW	220-224
	kVA	213-258
Prime	kW	190-203
	kVA	205-234

KEY FEATURES

ELECON industrial generators are efficient, Reliable and versatile source of power for Standby or Prime Power Applications. All generator sets and components are factory built, and productions tested. The Genset features a heavy-duty John Deere 4- cycle Diesel engine certified by the Environmental Protection Agency (EPA) to conform to Tier 3 non-road emission Regulations, an AC high capability alternator regulated by a precise Automatic Voltage Regulator. Heavy- duty Constructed chassis supports the complete set. The generator is protected by a best-in-class sound Attenuated enclosure designed for prime or standby applications.

- Engine – generating set tested to ISO 8528-5.
- The Genset engine is certified by the Environmental Protection Agency (EPA) Tier 3 non-road emission regulations
- The brushless, single bearing, 4 poles, 12-wire generator end, with automatic voltage regulator has broad range reconnect ability.
- The Genset is CSA certified.
- Integral vibration isolation rubbers eliminate the need of vibration spring isolators.
- Global product support.
- Operations and maintenance manuals.
- One Year Warranty Standard, Extended warranties are also available.
- Heavy duty construction that is designed for use in prime or standby applications.
- Assembled in Canada.

GENSET RATINGS

GENSET Model	ENGINE Model	ALTERNATOR Model	VOLTAGE N-L L-L	Ph	Hz	150°C RISE			125°C RISE		
						STANDBY RATING			PRIME RATING		
						kW	kVA	Amps	kW	kVA	Amps
EDG-270		HCI 444 D	120/208	3	60	274	342	949	246	308	855
			120/240	3	60	274	342	823	246	308	741
			277/480	3	60	275	344	413	247	309	372
		HCI 444 D	347/600	3	60	275	244	331	247	309	298

Ratings: Standby ratings are continuous for the duration of any power outage. No overload capacity is specified at this rating. Prime ratings are continuous per BS5514, DIN 6271, IDO-3046, and IEC34-1 with 10% overload capacity one hour in twelve hours. Larger alternators may be used to meet special application requirements. Elecon reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

GENERAL GUIDELINES FOR DERATION: ALTITUDE: Derate 1.5% per 1000ft. (305 m) elevation above 3300ft (1003 m) TEMPERATURE: Derate 0.5% per 10°F (5.5°C) temperature above 77°F (25°C)

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Engine Specification

GENERAL DATA			
Manufacturer	JOHN DEERE		
Engine model	6090HF484		
EPA Certification for:	Stage	Tier 3	
Rated	RPM	1800	
Nominal Power (PRIME)	kW – HP	284	380
Nominal Power (STANDBY)	kW – HP	315	422
Engine type	Diesel 4 stroke		
Injection type	HPCR		
Aspiration type	TURBOCHARGED		
Cylinder arrangement	6 – L		
Bore and stroke	(mm) – In	(118,4 x 136.0)	4,661 x 5,354
Displacement	L – in3	9.0	549
Cooling system	Liquid (Cool Guard II)		
Governor type	Electronic		
Air cleaner type	Medium duty w/double cartridge		
Compression ratio	16.0 : 1		

Application data

EXHAUST SYSTEM		PRIME	STANDBY
Exhaust manifold type		Dry	Dry
Exhaust outlet diameter	mm – In	110 – 4.334	
Max. Exhaust temp. at full load	°C	638	638
	°F	1180	1180
Exhaust Gas Flow	kg/h – Lb/h	1474.2 – 3250.05	1486.8 – 3277.82
	(m3/min) – ft3/min	(58.5) - 2066	(59.0) – 2084
Maximum allowed back pressure	(mm/H2O) – inH2O	762 – 30	

COOLING SYSTEM		
Engine cooling air flow	m3/s – ft3/s	9.9 – 350.2
Generator cooling air flow	m3/min – ft3/min	59.4 – 2,097.7
Total cooling air flow (engine + generator + combustion)		
Open Skid version	m3/min – ft3/min	1,360.0 – 48,027.9
Sound Attenuated version	m3/min – ft3/min	1,768.0 – 62,436.3
Total cooling capacity	l – gal	46.0 – 12.1
Antifreeze recommended	l – gal	23.0 – 6.1

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LUBRICATION SYSTEM		
Oil Filter: quantity. Type		1 x Cartridge
Oil pan capacity	l – gal	34 – 8.976
Oil pan capacity with filter	l – gal	29 – 7.656
Oil cooler		Water Cooled
Recommended oil		15W-40 or API CI-4 PLUS o CI-4
Specific oil consumption full load	% fuel	<0.1% <0.1%
Oil Press	(psi) – kPa	38 – 260

VENTILATION REQUIREMENTS		
Air requirement for combustion at 100% load/rated speed	m3/h – ft3/h	1530 – 54060
Cooling airflow	m3/h – ft3/h	--
Heat rejected to ambient:		
From engine	kW – btu/min	104 – 5920
From alternator	kW – btu/min	3.8 – 216.26

ELECTRICAL SYSTEMS		12V	24V
Ground (negative/positive)		Negative	Negative
Volts (DC)	V	12	24
Ampere rating	Amp	90	65
Starter motor rated voltage (DC)	V	12V	24
Starter motor rated	kW / HP	2.03 / 2.76	2.03 / 2.76
Battery recommendations			
Min. Cold Cranking Amps	Amp	1100	1100

FUEL SYSTEMS		
Recommended fuel		#2 Diesel
Fuel supply line. min. ID	mm – in	11 0.44
Fuel return line. min. ID	mm – in	10 0.38
Fuel pump Type		Engine Driven
Secondary filter		2µm
Secondary Water Separator		Included

		PRIME rating		STANDBY rating	
		l/h	gal/h	l/h	gal/h
100% Load	l/h – gal/h	69.8	18.4	74.4	19.6
75% Load	l/h – gal/h	60.2	15.9	64.2	17.0
50% Load	l/h – gal/h	42.7	11.3	45.5	12.0
25% Load	l/h – gal/h	22.1	5.8	23.8	6.2

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Alternator Specifications

GENERAL DATA	
Manufacturer	Stamford
Model (480V)	UCI 444 D
Alternator Type	4 poles, rotating field
Exciter Type	Brushless, self-excited
	PMG (optional)
Leads: quantity, type	12, reconnectable
Stator Pitch	2/3
Insulation system	
Material	Class H
Temperature rise	150 °C Standby 125 °C Prime
Bearing: quantity, type	Single bearing sealed
Coupling	Flexible disc
Automatic Voltage regulator	
STD regulator	SX440
PMG regulator or EBS	Opt MX341, Opt MX321
Voltage regulation, no load to full load	
STD regulator	+/-1.5%
PMG regulator load acceptance	+/-1%, +/-0.5%

SOUND ATTENUATED MODEL

STANDARD SIZE (Size W/Extended Capacity, Tank)	(Length x Width x Height)			
	mm	4,100 x 1,600 x 2,200		
	in	161.4 x 63.0 x 86.6		
Dry weight (with std. accessories)	kg Lb	4,010	8,840	
Fuel Tank Capacity	L Gal	590	155.8	
Run Time (Hr)	100 %	75%	50%	25%
Prime Power	30.5	9.8	13.8	26.7
Standby Power	27.9	9.2	13.0	25.0
Noise level	7 m	76 dBa		

OPEN SKID MODEL

Overall size (L x W x H)	(Length x Width x Height)			
	mm	2,794 x 1,219 x 1575		
	in	110 x 48 x 62		
Dry weight (with std. accessories)	kg Lb	2,945	6,490	
Fuel Tank Capacity	Optional			

