



# INDUSTRIAL Diesel Generator MODEL:EDG-400

## Specification & Application Data

### Rating Range – 60Hz Operation

Standby	kW	388-405
	kVA	485-506
Prime	kW	364-370
	kVA	455-461

### 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-405		HCI 444 F	120/208	3	60	388	485	1346	364	455	1263
			120/240	3	60	388	485	1167	364	455	1095
			277/480	3	60	405	506	609	369	461	555
		HCI 444 F	347/600	3	60	405	506	487	369	461	444

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)

**Specification & Application Data**

**Engine Specification**

<b>GENERAL DATA</b>			
<b>Manufacturer</b>	<b>JOHN DEERE</b>		
<b>Engine model</b>	<b>6135HF485</b>		
<b>EPA Certification for:</b>	Stage	Tier 3	
<b>Rated</b>	RPM	1800	
<b>Nominal Power (PRIME)</b>	kW – HP	419	561
<b>Nominal Power (STANDBY)</b>	kW – HP	460	617
<b>Engine type</b>	Diesel 4 stroke		
<b>Injection type</b>	UNIT INJECTION		
<b>Aspiration type</b>	TURBOCHARGED		
<b>Cylinder arrangement</b>	6 – L		
<b>Bore and stroke</b>	(mm) – In	(132 x 165)	5,20 x 6,50
<b>Displacement</b>	L – in3	13.5	824
<b>Cooling system</b>	Liquid (Cool Guard II)		
<b>Governor type</b>	Electronic		
<b>Air cleaner type</b>	Medium duty w/double cartridge		
<b>Compression ratio</b>	16.0 : 1		

**Application data**

<b>EXHAUST SYSTEM</b>		<b>PRIME</b>	<b>STANDBY</b>
<b>Exhaust manifold type</b>		Dry	Dry
<b>Exhaust outlet diameter</b>	mm - In	160 – 6.304	
<b>Max. Exhaust temp. at full load</b>	°C	427	471
	°F	801	880
<b>Exhaust Gas Flow</b>	kg/h – Lb/h	1839.9 – 4056.28	2041.2 – 4500.07
	(m3/min) – ft3/min	(73) - 2578	(81) – 2860
<b>Maximum allowed back pressure</b>	(mm/H2O) – inH2O	1016 – 40	

<b>COOLING SYSTEM</b>		
<b>Engine cooling air flow</b>	m3/s – ft3/s	13.7 – 483.6
<b>Generator cooling air flow</b>	m3/min – ft3/min	59.4 – 2,097.7
<b>Total cooling air flow (engine + generator + combustion)</b>		
<b>Open Skid version</b>	m3/min – ft3/min	1,831.0 – 64,661.2
<b>Sound Attenuated version</b>	m3/min – ft3/min	2,380.0 – 84,048.9
<b>Total cooling capacity</b>	l – gal	65.0 – 17.2
<b>Antifreeze recommended</b>	l – gal	32.5 – 8.6

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<b>LUBRICATION SYSTEM</b>		
Oil Filter: quantity. Type		1 x Cartridge
Oil pan capacity	l – gal	50 – 13.2
Oil pan capacity with filter	l – gal	40 – 10.56
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	42 – 287

<b>VENTILATION REQUIREMENTS</b>		
Air requirement for combustion at 100% load/rated speed	m3/h – ft3/h	2040 – 72060
Cooling airflow	m3/h – ft3/h	--
Heat rejected to ambient:		
From engine	kW – btu/min	231 – 13148
From alternator	kW – btu/min	5 – 284.55

<b>ELECTRICAL SYSTEMS</b>		<b>12V</b>	<b>24V</b>
Ground (negative/positive)		Negative	Negative
Volts (DC)	V	12	24
Ampere rating	Amp	90	65
Starter motor rated voltage (DC)	V	12	24
Starter motor rated	kW / HP	2.03 / 2.76	2.03 / 2.76
Battery recommendations			
Min. Cold Cranking Amps	Amp	1900	1900

<b>FUEL SYSTEMS</b>		
Recommended fuel		#2 Diesel
Fuel supply line. min. ID	mm – in	13 0.5
Fuel return line. min. ID	mm – in	10 0.38
Fuel pump Type		Engine Driven
Secondary filter		2µm
Secondary Water Separator		Included

		<b>PRIME rating</b>		<b>STANDBY rating</b>	
		<b>l/h</b>	<b>gal/h</b>	<b>l/h</b>	<b>gal/h</b>
100% Load	l/h – gal/h	100.9	26.6	115.3	30.5
75% Load	l/h – gal/h	74.8	19.7	83.5	22.0
50% Load	l/h – gal/h	51.9	13.7	57.6	15.2
25% Load	l/h – gal/h	29.5	7.8	31.8	8.4

**Specification & Application Data**

**Alternator Specifications**

GENERAL DATA	
Manufacturer	Stamford
Model (480V)	HCI 444 F
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		4,500 x 1,800 x 2,342	
	in		177.2 x 70.9 x 92.2	
Dry weight (with std. accessories)	kg	Lb	5,500	12,125
Fuel Tank Capacity	L	Gal	740	195.4
Run Time (Hr)	100 %		75%	50% 25%
Prime Power	30.5		9.9	14.3 25.1
Standby Power	27.9		8.9	12.8 23.3
Noise level	7 m		79 dBa	

**OPEN SKID MODEL**

Overall size (L x W x H)	(Length x Width x Height)			
	mm		3,175 x 1,575 x 2185	
	in		125 x 62 x 86	
Dry weight (with std. accessories)	kg	Lb	3,550	7,825
Fuel Tank Capacity	Optional			

