

X Q 200 RENTAL



Shown without optional trailer

STANDBY 200 kW PRIME 182 kW POWER MODULE 60 Hz 1800 rpm 480V

Frequency	Voltage	Standby kW (kVA)	Prime kW (kVA)
60 Hz	480/277V	200 (250)	182 (227.5)
60 Hz	240/139V	200 (250)	182 (227.5)
60 Hz	208/120V	200 (250)	182 (227.5)

FEATURES

FUEL/EMISSIONS STRATEGY

- EPA Tier 4 Interim and CARB Certified for Non-Road Mobile applications at all 60 Hz ratings

SINGLE-SOURCE SUPPLIER

- Factory designed and fully prototype tested with certified torsional vibration analysis available
- ISO 9001:2000 compliant facility

CAT® C7.1 Interim 4 ACERT™ DIESEL ENGINE

- Utilizes ACERT Technology and Cat NOx Reduction System (NRS)
- Cat CEM exhaust after treatment
- Four-stroke diesel engine combines consistent performance and excellent fuel economy with minimum weight
- Electronic engine control

CAT LC SERIES GENERATOR

- Matched to the performance and output characteristics of Cat engines
- UL 1446 Recognized Class H insulation

CAT EMCP 4.2 CONTROL PANEL

- Fully featured power metering, protective relaying and engine/generator control and monitoring
- Simple user friendly interface and navigation
- Automatic set-point adjustment

CAT DIGITAL VOLTAGE REGULATOR (CDVR)

- Three-phase sensing
- Adjustable volts-per-hertz regulation
- Provides precise control, excellent block loading, and constant voltage in the normal operating range

ENCLOSURE

- Highly corrosion resistant 12 gauge galvanealed sheet steel construction
- Two coat polyester powder-coated finish
- Six access doors for ease of maintenance
- Secure and safe design with safety glass control panel viewing window with lockable access door
- Fuel fill and battery can only be reached through lockable access doors
- Certified single point lifting eye and lifting points on the base frame

DISTRIBUTION PANEL

- Switchable voltage from 480/277V 3 phase to 240/139V 3 phase (can be adjusted down to 208/120V 3 Phase), 240/120V 1 phase

REAR CUSTOMER ACCESS

- Separate control panel and distribution panel access doors
- Hinged door over main bus connectors
- Emergency stop on panel
- Remote start/stop contacts

ENVIRONMENTALLY FRIENDLY DESIGN

- EPA Tier 4 Interim certified
- 110% spill containment of onboard engine fluids
- Meets 71 dB(A) at 7 m per SAE J1074

RENTAL READY FEATURES

- Anti-condensation heater 110-120 VAC
- Coolant heater 110-120 VAC
- UL Listed battery charger
- Solar powered battery maintainer
- Cam lock distribution system

X Q 200 R E N T A L



FACTORY INSTALLED STANDARD EQUIPMENT

SYSTEM	STANDARD EQUIPMENT
Air Inlet	Air cleaner, two stage cyclonic/paper with dust cup and service indicator Series turbocharger and air-to-air aftercooler
Charging System	12V - 100 Amp charging alternator UL/CSA listed 120V-10A battery charger Solar powered battery maintainer
Control Panel	EMCP 4.2 genset mounted controller Automatic start/stop with cool down timer Idle/rated switch Generator Protection features: 32, 32RV, 46, 50/51, 27/59, 81 O/U Metering display: voltage, current, frequency, power factor, kW, WHM, and kVAR
Cooling System	Package mounted radiator with vertical air discharge provides 43° C ambient capability at standby rating 120VAC coolant heater, fuse protected, thermostatically controlled, automatically disconnected on start-up Coolant drain line with internal control valve piped to base-frame Coolant sight gauge, level switch and shutdown 50% Coolant antifreeze with corrosion inhibitor
Distribution System	NEMA 1 steel enclosure with separate hinged, lockable door Main bus connections with hinged load cover with clear Plexiglas window closed for operation 4-pole 800A 100% UL circuit breaker with 12V DC shunt trip wired to load door safety switch Multiple duplex and twist lock receptacles with individual circuit breakers Two wire remote start/stop terminals and 120 VAC shore power connection for rapid starting CamLock distribution system
Enclosure	Sound attenuating, 12gauge galvanealed sheet metal enclosure limits overall noise to 71 dB(A) @ 7m (23') Interior walls and ceilings insulated with sound attenuating foam Black stainless steel pad-lockable latches, doorkeepers on all doors and zinc die-cast hinges/grab handles All components are pretreated for anti-corrosive protection prior to painting with polyester powder coat Painted Cat power module white with Cat rental decals
Engine	EPA approved Tier 4 Interim Cat C7.1 ATAAC heavy duty diesel engine Electronic ADEM™ A4 controls 12VDC energized to shutdown solenoid
Exhaust System	Cat Clean Emissions Module and integrated silencer with flexible connectors
Fuel System	350 gal fuel tank, UL listed, double wall, 24 hr runtime @ 100% prime rating Fuel cooler, primary fuel filters with integral water separator, and engine mounted secondary Switch operated electric priming pump Interconnected three way fuel for switching between remote and integral tank
Generator	Three-phase, random wound, 12-lead design, 0.667 pitch Screen protected and drip proof, self regulating, brushless generator with fully interconnected damper windings, IC06 cooling system and sealed for life bearings Class H insulation with coastal insulation protection. Windings are impregnated in a triple dip, thermo-setting moisture, oil and acid resisting polyester varnish. Heavy coat of anti-tracking varnish for additional protection against moisture and condensation Permanent magnet provides 350% short circuit, enhanced motor starting and non-linear performance 120VAC anti-condensation heater Cat digital voltage regulator (Cat DVR) with VAR/PF control
Lube System	Lubricating oil system including pump, integral oil cooler, lube oil, filter, open crankcase breather with filter Oil drain line with internal valve routed to connection point accessible from exterior 500 hour oil change intervals
Mounting System	Generator set soft mounted to the heavy duty, fabricated steel base frame using captive anti-vibration pads between the generator set and base-frame to ensure complete isolation of rotating assemblies Base frame includes integral fuel tank and provides 110% spill containment of all engine fluids
Starting System	Single 12V electric starting motor on engine One 12V-1000 CCA Cat brand maintenance free battery with disconnect switch, battery rack, and cables Glow plugs fitted on the engine
General	Factory testing of standard generator set and complete power module Full manufacturer's warranty O&M manuals
	OPTIONAL EQUIPMENT
Available Options	Canadian Standards Authority certification (CSA) Transport Canada compliant fuel tank (IBC CGSB43) Tandem axle trailers with either hydraulic or electric brakes



X Q 200 R E N T A L

TECHNICAL DATA

CAT GENERATOR	ENGINE
Frame Size LC5034H Pitch 0.667 No. of poles 4 Excitation Static regulated brushless PM excited Number of bearings..... Single bearing, close coupled Insulation..... Class H Enclosure Drip proof IP23 Alignment..... Pilot shaft Overspeed capability – % of rated125% of rated Voltage regulator 3 phase sensing with Volts-per-Hertz Voltage regulation..... Less than ± 1/2% voltage gain Adjustable to compensate for engine speed droop and line loss Wave form deviation 2% Telephone Influence Factor (TIF)..... Less than 50 Harmonic Distortion (THD)..... Less than 5%	ManufacturerCaterpillar Model.....C7.1 Type4-cycle Cylinder configurationIn-line 6 Displacement – L (cu in)7.01 L (427.7 in ³) Bore – mm (in)..... 105mm (4.13 in) Stroke – mm (in) 135 mm (5.3 in) Compression ratio..... 16.5:1 Engine RPM..... 2200 Aspiration..... ATAAC Fuel system MEUIC Governor type ADEM™ A4 Fuel..... Requires ULSD

Materials and specifications are subject to change without notice.

Generator Set Technical Data	Units	60Hz Standby	60Hz Prime
Power Rating	kW (KVA)	200 (250)	182 (227.5)
Performance Specification		DM	DM
Lubricating System			
Oil pan capacity	L (gal)	16(4.3)	16(4.3)
Fuel System			
Fuel consumption			
100% Load	L/hr (gal/hr)	59.5 (15.7)	53.1 (14.0)
75% Load	L/hr (gal/hr)	44.6 (11.8)	39.8 (10.5)
50% Load	L/hr (gal/hr)	29.8 (7.9)	27.8 (7.3)
Fuel Tank Capacity	L (gal)	1295 (350)	1295 (350)
Running time @ 75% rating	Hr	29	33
Cooling System			
Ambient Capability	°C (°F)	43	43
Engine & Radiator coolant capacity	L (gal)	28 (7.6)	28 (7.6)
Engine coolant capacity	L (gal)	11.5 (3.1)	11.5 (3.1)
Air Requirements			
Combustion air flow	m ³ /min (cfm)	14.3 (505)	13.6 (480.3)
Maximum dirty air cleaner restriction	kPa (in H ₂ O)		
Exhaust System			
Exhaust flow at rated	m ³ /min (cfm)	N/A	13.1 (462.6)
Exhaust temperature at rated kW – dry exhaust	°C (°F)	506 (942.8)	N/A
Noise Rating (with enclosure)*			
@ 7 meters (23 feet)	dB(A)	71	71
Emissions (Tier 4 interim regulation)			
NOx	g/hp-hr	1.9	1.9
CO	g/hp-hr	.2	.2
HC	g/hp-hr	.02	.02
PM	g/hp-hr	.005	.005

Model	Length mm (in)	Width mm (in)	Height mm (in)	Weight with Lube oil and Coolant kg (lb)	Weight with fuel, lube oil and coolant Kg (lb)
XQ200 w/o trailer	4083 (161)	1401(52)	2162(85)	4053 (8916)	5300 (11660)
XQ200 w/ trailer	6019 (237)	2235(88)	2577(101)	4969 (10932)	6300 (13860)

CONTROL PANEL

FEATURES

- EMCP 4.2 engine operator interface
- Battery charger indicator
- Fuel level display
- Idle /rated switch
- Panel light momentary pushbutton
- Voltage adjust potentiometer
- Regeneration alarm indications for DPF 80% soot level and high exhaust temperature
- Coolant alarm
- Emergency stop pushbutton
- Alarm horn
- Convenient service access for Cat (service tools not included).

EMCP 4.2 ENGINE OPERATOR INTERFACE

- Controls
 - Run/Auto/Stop
 - Speed Adjust
 - Cool-down timer
 - Emergency Stop
 - Cycle crank
- Engine Monitoring:
 - RPM
 - Operating hours
 - Coolant Temperature
 - DC Volts
 - Oil pressure
 - Oil Temperature
- True RMS AC metering, 3 phase
 - L-L volts, L-N volts, phase amps
 - Average volts, Amps, Frequency
 - ekW, kVA, kVAR, kW-hr, %kW
 - Power Factor (Average, Phase)
 - kW-hr, kVA-hr (total)
- Shutdowns with common indicating light for:
 - Low oil pressure
 - High Coolant Temp
 - Failure to Start (Overcrank)
 - Emergency stop
 - Overspeed
 - High Oil Temperature
 - Low Coolant level
- Fuel level monitoring and control.

EMCP 4.2 GENERATOR PROTECTIVE RELAYING

- Generator protective features provided by EMCP 4.2
 - Phase over/under voltage (Device 27/59)
 - Over/Under frequency (Device 81 O/U)
 - Reverse Power (Device 32/32RV)
 - Current Balance (46)
 - Overcurrent (Device 50/51) (GCB trip unit)
 - Loss of Excitation (Device 40) (CDVR)
 - Generator Phase Sequence



DISTRIBUTION PANEL

- One 4 pole 800 A MCCB, with 12 VDC shunt trip coil activated on any monitored engine or electrical
- Under-voltage release NEMA 1 steel enclosure with hinged lockable door with clear Plexiglas window
- Bus bars are sized for full load capacity of the generator set at 0.8 power factor.
- Includes ground bus, tin-plated copper, for connection to the generator frame ground and field ground cable.
- Customer convenience panel with multiple output receptacles:
 - 1 – 125V, 30 A single phase auxiliary supply
 - 2 – 240V, 50A California style Twist Lock.
 - 2 – 120/208V, 20A Twist Lock.
 - 2 – 120V, 20A Duplex Receptacles with GFI..
- CamLock distribution system
- Consistent 120VAC output from GFCI receptacles independent of bus bar voltage

AC DISTRIBUTION

- Provides 120 VAC for all module accessories.
- Includes controls to de-energize jacket water heaters, battery charger, and generator space heater when the engine is running.

RATING DEFINITIONS AND CONDITIONS

Meets or Exceeds International Specifications:

CSA 22.0 No. 100, IEC60034-22, ISO3046, ISO8528, NEMA MG1-22, NEMA MG1-16, UL1004B, NEC, CEC, 2006/42/EEC, 2006/95/EC, 2004/108/EC, 2000/EC/14, UL142, ULc601, IBC CGSB43, API 546, EGSA 101P, IEEE 43, DEFRA, UL1741, NFPA 99/110, OSHA, 97/68/EC, BS4999, BS5000, IEC60034-5

Fuel Rates are based on fuel oil of 35o API {16oC (60oF)} gravity having an LHV of 42780 kJ/kg (18390 Btu/lb) when used at 29oC (85oF) and weighing 838.9 g/liter (7.001 /b/U.S. gal). Additional ratings may be available for Specific customer requirements, contact your Caterpillar Representative for details. For information regarding Low Sulfur fuel and biodiesel capability, consult your Cat Dealer.

Standby – Applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings. The generator on the generator set is peak prime rated (as defined in ISO852 at 30° C (86° F).

Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO0346 standard conditions.

Prime – Applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchase power. There is no limitation on the annual hours of operation and the generator can supply 10% overload power.

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**GEN SET PACKAGE PERFORMANCE DATA
[P3730A]**
NOVEMBER 09, 2012

 For Help Desk Phone Numbers [Click here](#)

Performance Number: P3730A

Change Level: 00

Sales Model: C7.1 DITA	Combustion: DI	Aspr: TA
Engine Power: 321 HP	Speed: 1,800 RPM	After Cooler: AA
Manifold Type:	Governor Type:	After Cooler Temp(F): 133
Turbo Quantity:	Engine App: GP	Turbo Arrangement:
Hertz: 60	Application Type: PACKAGE-DIE	Engine Rating: PGS
Rating Type: STANDBY	Certification: EPA TIER 4 -	Strategy:

General Performance Data 1

ENGINE POWER BHP	PERCENT LOAD	ENGINE BMEP PSI	FUEL BSFC LB/BHP-HR	FUEL RATE GPH	INTAKE MFLD P IN-HG	INTAKE AIR FLOW CFM	EXH STACK TEMP DEG F	EXH GAS FLOW CFM
320.5	100	330.52	0.36	16.38	74.66	501.47	944.78	1,359.62
291	91	300.77	0.36	14.79	71.61	480.28	867.38	1,232.48
218.32	68	224.74	0.36	11.08	60.35	413.18	706.64	928.78
145.5	45	152.03	0.37	7.7	40.98	331.96	637.52	695.7
72.82	23	76.03	0.43	4.47	23.6	271.92	496.94	487.34

Engine Heat Rejection Data

REJ TO JW BTU/MN	PERCENT LOAD	REJ TO EXHAUST BTU/MN	FROM AFT CLR BTU/MN
8,206.32		2,560	14,132.2
7,552.32		2,356	12,818.5
5,925.84		1,849	9,667.9
4,458.6		1,391	7,239.5
2,735.44		853	5,095.5

EMISSIONS DATA

EPA TIER 4 - ***** J1

No notes were found for this certification...

REFERENCE EXHAUST STACK DIAMETER	0 IN
WET EXHAUST MASS	2,301.6 LB/HR
WET EXHAUST FLOW (-- STACK TEMP)	--
WET EXHAUST FLOW RATE (32 DEG F AND 29.98 IN HG)	--
DRY EXHAUST FLOW RATE (32 DEG F AND 29.98 IN HG)	--
FUEL FLOW RATE	--

RATED SPEED "Potential site variation"

TOTAL NOX (AS NO2) LB/HR	PERCENT LOAD	TOTAL CO LB/HR	TOTAL HC LB/HR	PART MATTER LB/HR
0	0	.0100	.0000	.0000

The powers listed above and all the Powers displayed are Corrected Powers

Identification Reference and Notes			
Engine Arrangement:		Lube Oil Press @ Rated Spd(PSI):	0.0
Effective Serial No:		Piston Speed @ Rated Eng SPD (FT/Min):	--
Primary Engine Test Spec:		Max Operating Altitude(FT):	9,842.5
Performance Parm Ref:		PEEC Elect Control Module Ref	
Performance Data Ref:	P3730A	PEEC Personality Cont Mod Ref	
Aux Coolant Pump Perf Ref:			
Cooling System Perf Ref:		Turbocharger Model	
Certification Ref:	EPA TIER 4 interim	Fuel Injector	
Certification Year:		Timing-Static (DEG):	--
Compression Ratio:	16.5	Timing-Static Advance (DEG):	--
Combustion System:	DI	Timing-Static (MM):	--
Aftercooler Temperature (F):	133	Unit Injector Timing (MM):	--
Crankcase Blowby Rate(CFH):	--	Torque Rise (percent)	0.0
Fuel Rate (Rated RPM) No Load (Gal/HR):	--	Peak Torque Speed RPM	1800
Lube Oil Press @ Low Idle Spd(PSI):	0.0	Peak Torque (LB/FT):	933.8

**Reference
Number: P3730A**

EPA TIER 4 J1

**Parameters
Reference:**

J1

Caterpillar Confidential: **Green**

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GENERATOR DATA**NOVEMBER 09, 2012**For Help Desk Phone Numbers [Click here](#)**Selected Model**

Engine: C7.1 **Generator Frame:** LC5034H **Genset Rating (kW):** 200.0 **Line Voltage:** 480
Fuel: Diesel **Generator Arrangement:** 3544073 **Genset Rating (kVA):** 250.0 **Phase Voltage:** 277
Frequency: 60 **Excitation Type:** Permanent Magnet **Pwr. Factor:** 0.8 **Rated Current:** 300.7
Duty: STANDBY **Connection:** SERIES STAR **Application:** EPG **Status:** Current

Version: 40953 /40225 /40975 /6778

Spec Information

Generator Specification			Generator Efficiency		
Frame: LC5034H	Type: LC	No. of Bearings: 1	Per Unit Load	kW	Efficiency %
Winding Type: RANDOM WOUND		Flywheel: 11.5	0.25	50.0	89.3
Connection: SERIES STAR		Housing: 3	0.5	100.0	92.4
Phases: 3		No. of Leads: 12	0.75	150.0	93.2
Poles: 4		Wires per Lead: 1	1.0	200.0	93.0
Sync Speed: 1800		Generator Pitch: 0.6667			

Reactances	Per Unit	Ohms
SUBTRANSIENT - DIRECT AXIS X''_d	0.0777	0.0716
SUBTRANSIENT - QUADRATURE AXIS X''_q	0.0959	0.0884
TRANSIENT - SATURATED X'_d	0.1288	0.1187
SYNCHRONOUS - DIRECT AXIS X_d	2.7148	2.5020
SYNCHRONOUS - QUADRATURE AXIS X_q	1.6289	1.5012
NEGATIVE SEQUENCE X_2	0.0865	0.0797
ZERO SEQUENCE X_0	0.0043	0.0040

Time Constants	Seconds
OPEN CIRCUIT TRANSIENT - DIRECT AXIS T'_{d0}	2.1050
SHORT CIRCUIT TRANSIENT - DIRECT AXIS T'_d	0.1000
OPEN CIRCUIT SUBTRANSIENT - DIRECT AXIS T''_{d0}	0.0170
SHORT CIRCUIT SUBTRANSIENT - DIRECT AXIS T''_d	0.0100
OPEN CIRCUIT SUBTRANSIENT - QUADRATURE AXIS T''_{q0}	0.1690
SHORT CIRCUIT SUBTRANSIENT - QUADRATURE AXIS T''_q	0.0100
EXCITER TIME CONSTANT T_e	0.0100
ARMATURE SHORT CIRCUIT T_a	0.0150

Short Circuit Ratio: 0.46

Stator Resistance = 0.0317 Ohms

Field Resistance = 0.264 Ohms

Voltage Regulation		Generator Excitation		
Voltage level adjustment: +/-	5.0%	No Load	Full Load, (rated) pf	
Voltage regulation, steady state: +/-	0.5%		Series	Parallel
Voltage regulation with 3% speed change: +/-	0.5%	Excitation voltage:	9.06 Volts	36.23 Volts Volts
Waveform deviation line - line, no load: less than	2.0%	Excitation current	1.03 Amps	3.39 Amps Amps
Telephone influence factor: less than	50			

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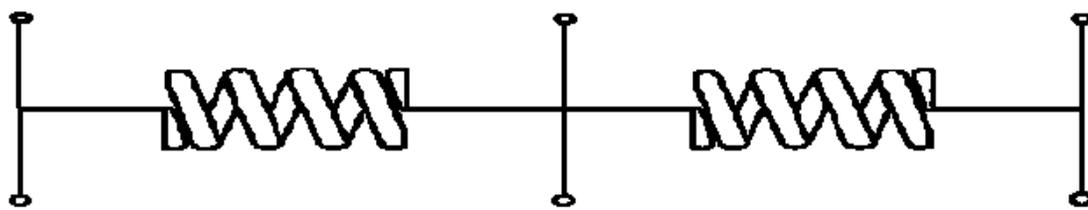
Generator Mechanical Information

Center of Gravity		
Dimension X	-460.0 mm	-18.1 IN.
Dimension Y	0.0 mm	0.0 IN.
Dimension Z	0.0 mm	0.0 IN.

- "X" is measured from driven end of generator and parallel to rotor. Towards engine fan is positive. See General Information for details
- "Y" is measured vertically from rotor center line. Up is positive.
- "Z" is measured to left and right of rotor center line. To the right is positive.

Generator WT = 710 kg	* Rotor WT = 278 kg	* Stator WT = 432 kg
1,565 LB	613 LB	952 LB

Rotor Balance = 0.0508 mm deflection PTP
 Overspeed Capacity = 125% of synchronous speed

Generator Torsional Data						
						
J1 = Coupling and Fan		J2 = Rotor		J3 = Exciter End		
TOTAL J = J1 + J2 + J3						
K1 = Shaft Stiffness between J1 + J2 (Diameter 1)			K2 = Shaft Stiffness between J2 + J3 (Diameter 2)			
J1	K1	Min Shaft Dia 1	J2	K2	Min Shaft Dia 2	J3
4.7 LB IN. s ²	41.7 MLB IN./rad	4.5 IN.	14.7 LB IN. s ²	37.7 MLB IN./rad	4.3 IN.	1.2 LB IN. s ²
0.53 N m s ²	4.71 MN m/rad	115.0 mm	1.66 N m s ²	4.26 MN m/rad	110.0 mm	0.133 N m s ²
Total J						
			20.6 LB IN. s ²			
			2.323 N m s ²			

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**Generator Cooling Requirements -
Temperature - Insulation Data**

Cooling Requirements:		Temperature Data: (Ambient 40 °C)	
Heat Dissipated: 15.1 kW		Stator Rise:	105.0 °C
Air Flow: 30.6 m ³ /min		Rotor Rise:	105.0 °C
Insulation Class: H			
Insulation Reg. as shipped: 100.0 MΩ minimum at 40 °C			

Thermal Limits of Generator

Frequency:	60 Hz
Line to Line Voltage:	480 Volts
B BR 80/40	240.0 kVA
F BR -105/40	273.0 kVA
H BR - 125/40	300.0 kVA
F PR - 130/40	300.0 kVA
H PR - 150/40	318.0 kVA
H PR27 - 163/27	330.0 kVA

Selected Model

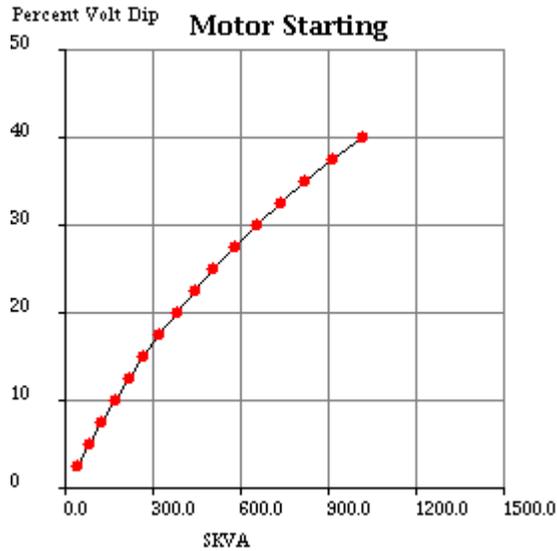
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Starting Capability & Current Decrement

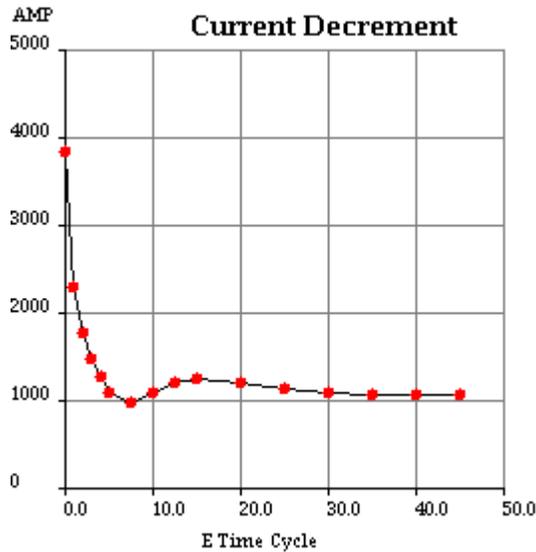
Motor Starting Capability (0.6 pf)

SKVA	Percent Volt Dip
39	2.5
80	5.0
123	7.5
169	10.0
217	12.5
268	15.0
323	17.5
380	20.0
442	22.5
507	25.0
577	27.5
652	30.0
733	32.5
819	35.0
913	37.5
1,014	40.0



Current Decrement Data

E Time Cycle	AMP
0.0	3,839
1.0	2,287
2.0	1,767
3.0	1,481
4.0	1,268
5.0	1,093
7.5	972
10.0	1,102
12.5	1,194
15.0	1,253
20.0	1,213
25.0	1,129
30.0	1,086
35.0	1,072
40.0	1,070
45.0	1,073



Instantaneous 3 Phase Fault Current: 3839 Amps **Instantaneous Line - Line Fault Current:** 3148 Amps
Instantaneous Line - Neutral Fault Current: 5313 Amps

Selected Model

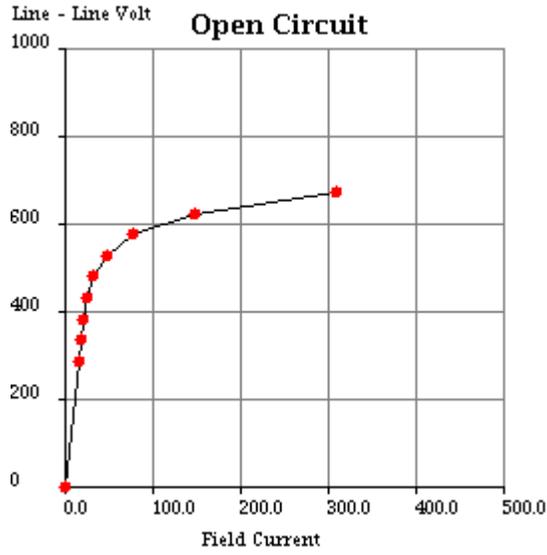
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Generator Output Characteristic Curves

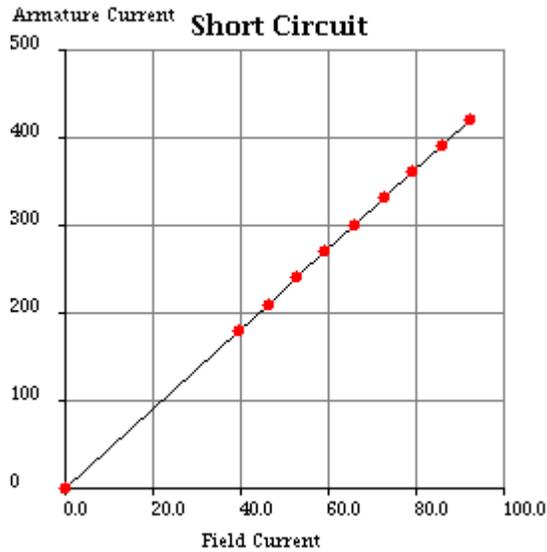
Open Circuit Curve

Field Current	Line - Line Volt
0.0	0
14.8	288
17.6	336
20.9	384
25.4	432
32.8	480
47.0	528
77.5	576
146.7	624
308.1	672



Short Circuit Curve

Field Current	Armature Current
0.0	0
39.6	180
46.2	210
52.8	241
59.3	271
65.9	301
72.5	331
79.1	361
85.7	391
92.3	421



Selected Model

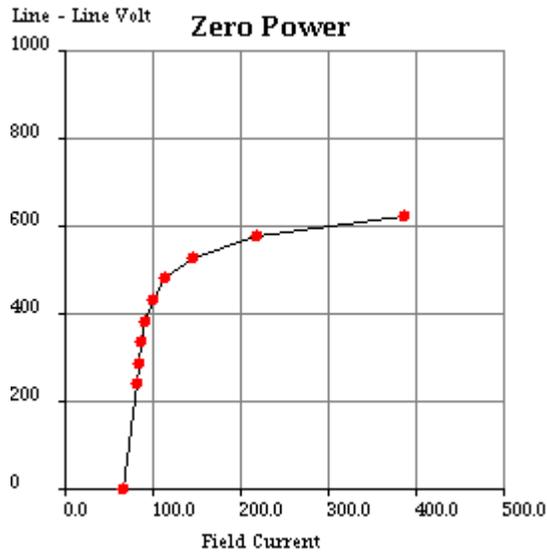
Engine: C7.1 **Generator Frame:** LC5034H **Genset Rating (kW):** 200.0 **Line Voltage:** 480
Fuel: Diesel **Generator Arrangement:** 3544073 **Genset Rating (kVA):** 250.0 **Phase Voltage:** 277
Frequency: 60 **Excitation Type:** Permanent Magnet **Pwr. Factor:** 0.8 **Rated Current:** 300.7
Duty: STANDBY **Connection:** SERIES STAR **Application:** EPG **Status:** Current

Version: 40953 /40225 /40975 /6778

Generator Output Characteristic Curves

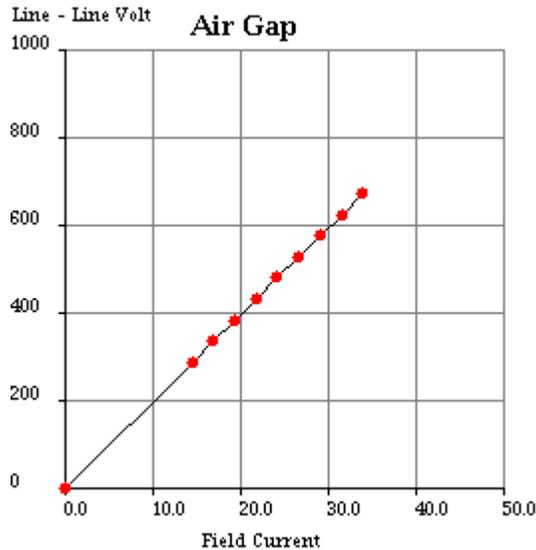
Zero Power Factor Curve

Field Current	Line - Line Volt
65.9	0
80.7	240
83.5	288
86.9	336
91.5	384
99.1	432
113.9	480
145.7	528
218.1	576
386.9	624



Air Gap Curve

Field Current	Line - Line Volt
0.0	0
14.5	288
16.9	336
19.4	384
21.8	432
24.2	480
26.6	528
29.0	576
31.5	624
33.9	672



Selected Model

Engine: C7.1 **Generator Frame:** LC5034H **Genset Rating (kW):** 200.0 **Line Voltage:** 480
Fuel: Diesel **Generator Arrangement:** 3544073 **Genset Rating (kVA):** 250.0 **Phase Voltage:** 277
Frequency: 60 **Excitation Type:** Permanent Magnet **Pwr. Factor:** 0.8 **Rated Current:** 300.7
Duty: STANDBY **Connection:** SERIES STAR **Application:** EPG **Status:** Current

Version: 40953 /40225 /40975 /6778**Reactive Capability Curve**[Click to view Chart](#)

Selected Model

Engine: C7.1 **Generator Frame:** LC5034H **Genset Rating (kW):** 200.0 **Line Voltage:** 480
Fuel: Diesel **Generator Arrangement:** 3544073 **Genset Rating (kVA):** 250.0 **Phase Voltage:** 277
Frequency: 60 **Excitation Type:** Permanent Magnet **Pwr. Factor:** 0.8 **Rated Current:** 300.7
Duty: STANDBY **Connection:** SERIES STAR **Application:** EPG **Status:** Current

Version: 40953 /40225 /40975 /6778

General Information

 GENERATOR INFORMATION (DM7809)

T26S004

1.Motor Starting

Motor starting curves are obtained in accordance with IEC60034, and are displayed at 0.6 power factor.

2.Voltage Dip

Prediction of the generator synchronous voltage dip can be made by consulting the plot for the voltage dip value that corresponds to the desired motor starting kVA value.

3.Definitions
A)Generator Keys

Frame: abbreviation of generator frame size

Freq: frequency in hertz.

PP/SB: prime/standby duty respectively

Volts: line - line terminal voltage

kW: rating in electrical kilo watts

Model: engine sales model

B)Generator Temperature Rise

The indicated temperature rises are the IEC/NEMA limits for standby or prime power applications. The quoted rise figures are maximum limits only and are not necessarily indicative of the actual temperature rise of a given machine winding.

C)Centre of Gravity

The specified centre of gravity is for the generator only. For single bearing, and two bearing close coupled generators, the center of gravity is measured from the generator/engine flywheel-housing interface and from the centreline of the rotor shaft.

For two bearing, standalone generators, the center of gravity is measured from the end of the rotor shaft and from the centerline of the rotor shaft.

D)Generator Current Decrement Curves

The generator current decrement curve indicates the generator armature current arising from a symmetrical three-phase fault at the generator terminals. Generators equipped with AREP or PMG excitation systems will sustain 300% of rated armature current for 10 seconds.

E)Generator Efficiency Curves

The efficiency curve is displayed for the generator only under the given conditions of rating, voltage, frequency and power factor. This is not the overall generating set efficiency curve.

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