MARATHON ELECTRIC GENERATORS

TYPICAL SUBMITTAL DATA

MODEL : 440MSL0861

BASE MODEL: 440MSL0861 **Winding WC- 861**

Submittal Data: 415 Volts*, 60 kW, 75 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase

11/01/2001

Kilowatt ratings at	**1800 RPM**		**60 Hertz**		**12 LEADS**	**Standard 3 phase**		
kW (kVA)	**3 Phase**		**0.8 Power Factor**			**Dripproof or Open Enclosure**		
	Class B	**Class F**					**Class H**		
Voltage*	**80º C ① Continuous**	**90º C ① Lloyds**	**95º C ① ABS**	**105º C British Standard**	**105º C Continuous**	**130º C ① Standby**	**125º C British Standard**	**125º C Continuous**	**150º C ① Standby**
415	60 (75)	60 (75)	60 (75)	60 (75)	60 (75)	60 (75)	60 (75)	60 (75)	

①Rise by resistance method, Mil-Std-705, Method 680.1b. *British Standard Rating per BS 5000*

Submittal Data: 415 Volts*, 60 kw, 75 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase **STD. CONNECTION**

Mil-Std-705B Method	**Description**	**Value**
301.1b	Insulation Resistance	>1.5 Meg
302.1a	High Potential Test	
	Main Stator	2000 Volts
	Main Rotor	1500 Volts
	Exciter Stator	1500 Volts
	Exciter Rotor	1500 Volts
	PMG Stator	NS**
401.1a	Stator Resistance, Line to Line	
	High Wye Connection	0.058 Ohms
	Rotor Resistance	0.67 Ohms
	Exciter Stator	
	Exciter Rotor	0.114 Ohms
	PMG Stator	NS**
410.1a	No Load Exciter Field Amps	
	at 208/415 Volts Line to Line	
420.1a	Short Circuit Ratio	0.765
421.1a	Xd Synchronous Reactance	1.71 p.u.
		3.94 ohms
422.1a	X2 Negative Sequence React.	0.079 pu
		0.182 ohms
423.1a	X0 Zero Sequence Reactance	0.019 pu
		0.044 ohms
425.1a	X'd Transient Reactance	0.106 pu
		0.244 ohms
426.1a	X"d Subtransient Reactance	0.079 pu
		0.182 ohms
--	Xq Quadrature Synch. React.	Not Available
427.1a	T'd Transient Short Circuit	
	Time Constant	0.09 sec.
428.1a	T"d Subtransient Short Circuit	
	Time Constant	0.035 sec.
430.1a	T'do Transient Open Circuit	
	Time Constant	1.38 sec.
432.1a	Ta Short Circuit Time	
	Constant of Armature Winding	0.006 sec.

Mil-Std-705B Method	**Description**	**Value**
505.3b	Overspeed	2250 RPM
507.1c	Phase Sequence CCW-ODE	ABC
508.1c	Voltage Balance, L-L or L-N	0.20%
601.4a	L-L Harmonic Maximum - Total	@NA
	(Distortion Factor)	
601.4a	L-L Harmonic Maximum - Single	@NA
601.1c	Deviation Factor	@NA
---	TIF (1960 Weightings)	< @NA
---	THF (IEC, BS & NEMA Weightings)	@NA
652.1a	Shaft Current	< 0.1 ma
---	Main Stator Capacitance to ground	@NA mfd
	Additional Prototype Mil-Std Methods are Available on Request.	
--	Generator Frame	440
--	Type	LIMA MAC
--	Insulation	Class F
--	Coupling - Single Bearing	Flexible
--	Amortisseur Windings	Full
--	Excitation	Ext. Voltage Regulated, Brushless
--	Voltage Regulator	NONE
--	Voltage Regulation	4.00%
--	Cooling Air Volume	1800 CFM
--	Heat rejection rate	324 Btu's/min
--	Full load current	104 amps
--	Minimum Input hp required	88.1
	Efficiency at rated load :	91.3%
--	Full load torque	257 Lb-ft

(3) Excitation support system or PMG required to sustain short circuit currents.
** Voltages refer to wye (star) connection, unless otherwise specified.*
*** Not supplied as standard equipment.*

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TYPICAL DYNAMIC CHARACTERISTICS

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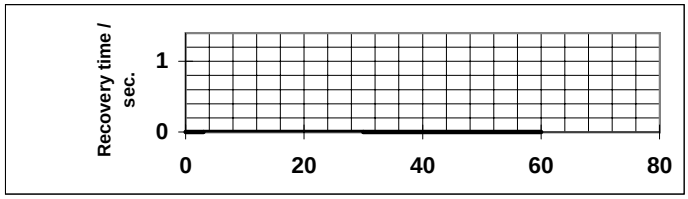
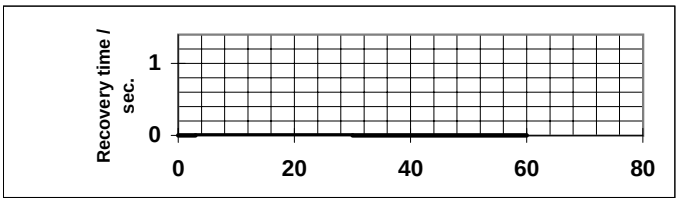
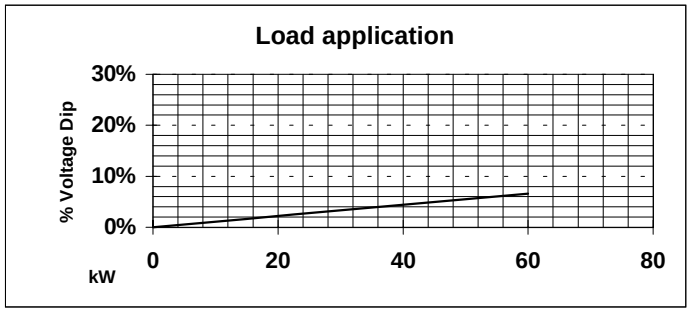
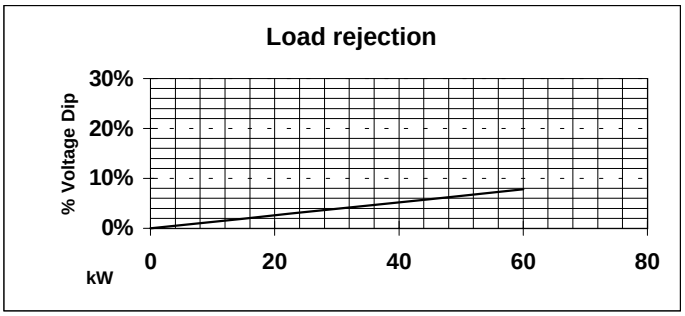
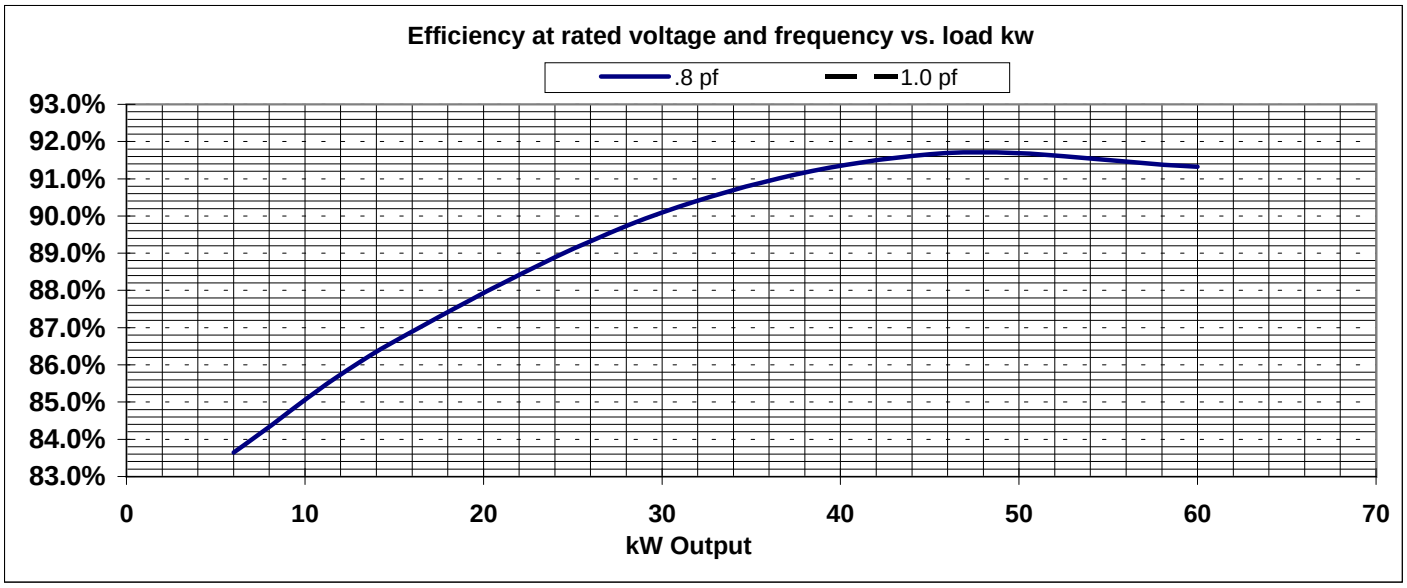
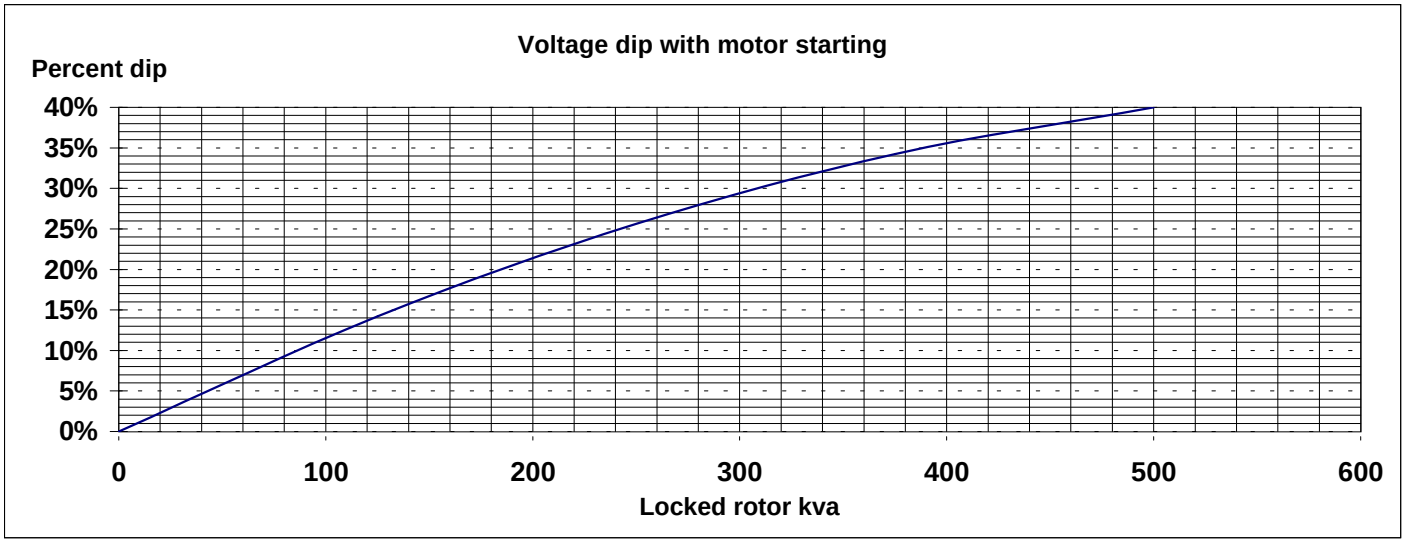
BASE MODEL: 440MSL0861 **Winding WC- 861**

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