MARATHON ELECTRIC GENERATORS

TYPICAL SUBMITTAL DATA

MODEL : 740RSL4046

BASE MODEL: 740RSL4046 **Winding H-SG 570111A**

Submittal Data: 415 Volts*, 975.2 kW, 1219 kVA, 0.8 P.F., 1500 RPM, 50 Hz, 3 Phase

10/24/2001

Kilowatt ratings at	**1500 RPM**		**50 Hertz**		**4 BARS**	**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**
440	555 (694)	635 (794)	670 (838)	730 (913)	730 (913)	830 (1038)	800 (1000)	800 (1000)	875 (1094)
415	735 (919)	800 (1000)	825 (1031)	885 (1106)	885 (1106)	975 (1219)	925 (1156)	950 (1188)	1020 (1275)
400	790 (988)	845 (1056)	800 (1000)	920 (1150)	920 (1150)	1000 (1250)	970 (1213)	980 (1225)	1070 (1338)
380	775 (969)	830 (1038)	785 (981)	900 (1125)	900 (1125)	975 (1219)	945 (1181)	960 (1200)	1040 (1300)
346	725 (906)	770 (963)	730 (913)	830 (1038)	830 (1038)	900 (1125)	870 (1088)	885 (1106)	960 (1200)

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

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Mil-Std-705B Method	**Description**	**Value**
301.1b	Insulation Resistance	>1.5 Meg
302.1a	High Potential Test	
	Main Stator	2200 Volts
	Main Rotor	1500 Volts
	Exciter Stator	1500 Volts
	Exciter Rotor	1500 Volts
	PMG Stator	1500 Volts
401.1a	Stator Resistance, Line to Line	
	High Wye Connection	0.003 Ohms
	Rotor Resistance	0.704 Ohms
	Exciter Stator	23 Ohms
	Exciter Rotor	0.7 Ohms
	PMG Stator	2.1 Ohms
410.1a	No Load Exciter Field Amps	0.95 A DC
	at 415 Volts Line to Line	
420.1a	Short Circuit Ratio	0.568
421.1a	Xd Synchronous Reactance	2.77 p.u.
		0.391 ohms
422.1a	X2 Negative Sequence React.	0.194 pu
		0.027 ohms
423.1a	X0 Zero Sequence Reactance	0.063 pu
		0.009 ohms
425.1a	X'd Transient Reactance	0.131 pu
		0.019 ohms
426.1a	X"d Subtransient Reactance	0.105 pu
		0.015 ohms
--	Xq Quadrature Synch. React.	0.708 pu
		0.1 ohms
427.1a	T'd Transient Short Circuit	
	Time Constant	0.127 sec.
428.1a	T"d Subtransient Short Circuit	
	Time Constant	0.011 sec.
430.1a	T'do Transient Open Circuit	
	Time Constant	2.38 sec.
432.1a	Ta Short Circuit Time	
	Constant of Armature Winding	0.024 sec.

Mil-Std-705B Method	**Description**	**Value**
505.3b	Overspeed	1875 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	5.0%
	(Distortion Factor)	
601.4a	L-L Harmonic Maximum - Single	3.0%
601.1c	Deviation Factor	5.0%
---	TIF (1960 Weightings)	< 50
---	THF (IEC, BS & NEMA Weightings)	< 2 %
652.1a	Shaft Current	< 0.1 ma
---	Main Stator Capacitance to ground	0.014 mfd
	Additional Prototype Mil-Std Methods are Available on Request.	
--	Generator Frame	740
--	Type	MAGNAMAXDVR
--	Insulation	Class H
--	Coupling - Single Bearing	Flexible
--	Amortisseur Windings	Full
--	Excitation	Ext. Voltage Regulated, Brushless
--	Voltage Regulator	DVR2000
--	Voltage Regulation	0.25%
--	Cooling Air Volume	@NA CFM
--	Heat rejection rate	3295 Btu's/min
--	Full load current	1696 amps
--	Minimum Input hp required	1384.9
	Efficiency at rated load :	94.4%
--	Full load torque	4847 Lb-ft

(3) Excitation support system or PMG required to sustain short circuit currents.
** Voltages refer to wye (star) connection, unless otherwise specified.*

Data rev. : 06/01/92
Version : 2001.2

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TYPICAL DYNAMIC CHARACTERISTICS

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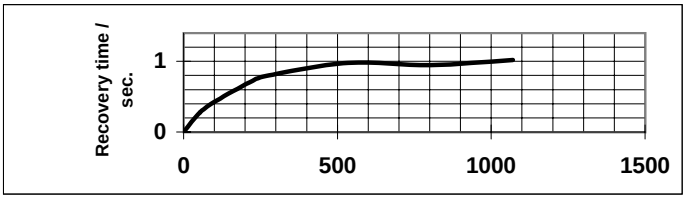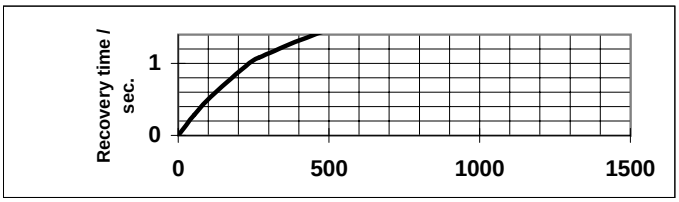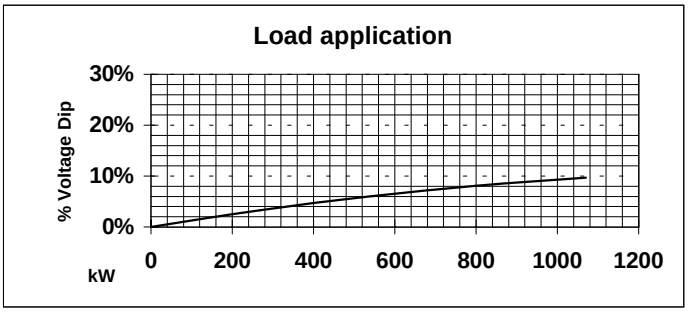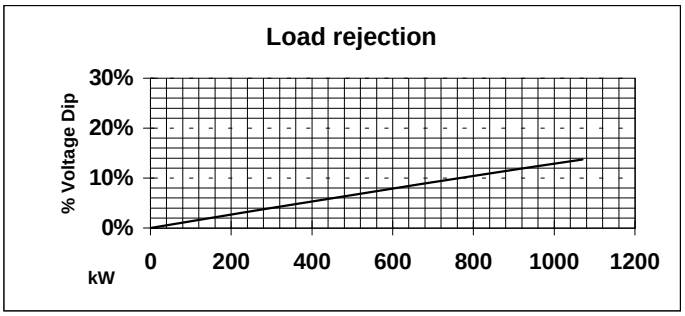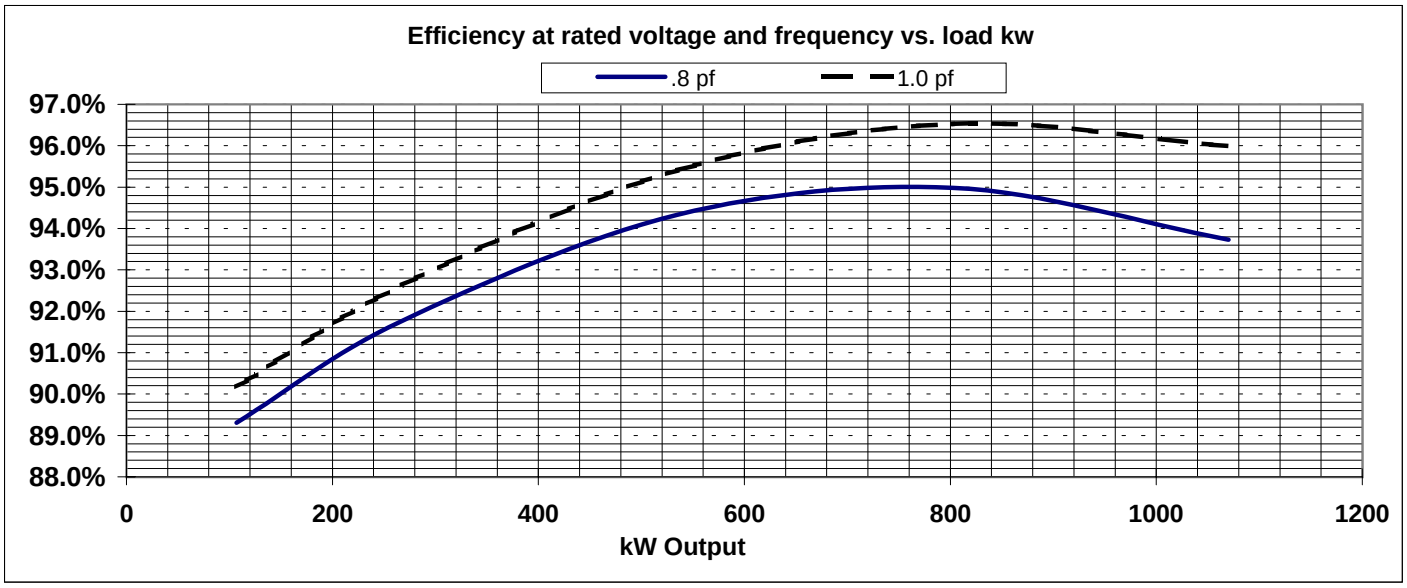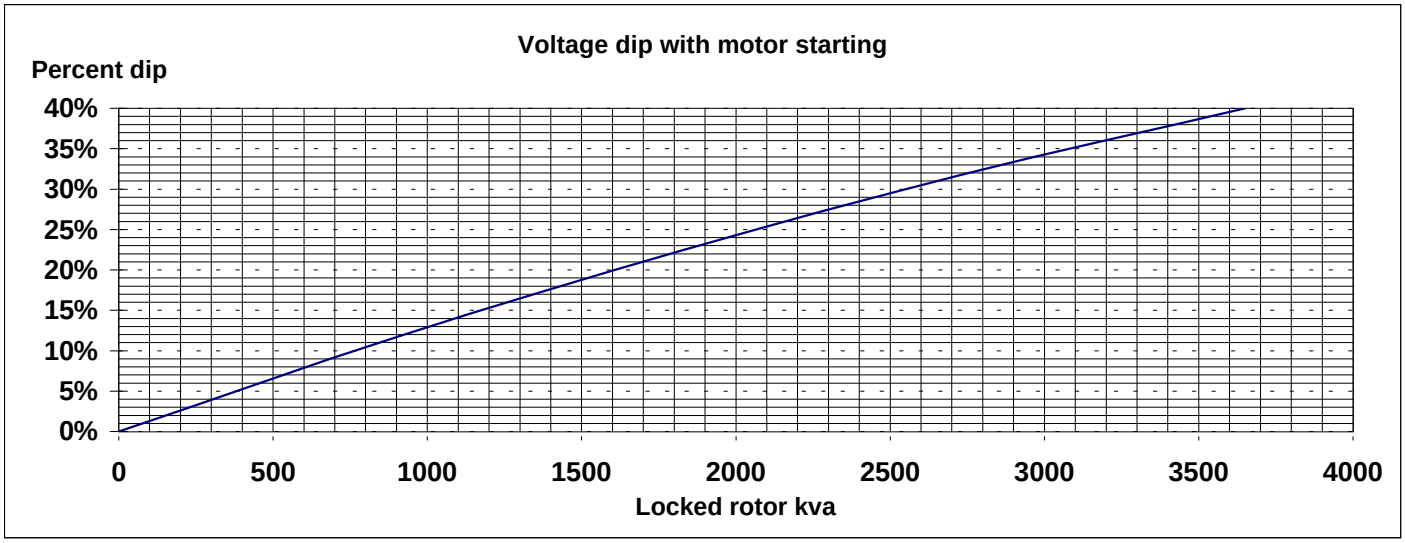
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