MARATHON ELECTRIC GENERATORS

TYPICAL SUBMITTAL DATA

MODEL : 742RSL4049

BASE MODEL: 742RSL4049 **Winding H-SG 740063**

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**		**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**
440/220	585 (731)	660 (825)	690 (863)	750 (938)	750 (938)	825 (1031)	810 (1013)	825 (1031)	890 (1113)
415/208	745 (931)	820 (1025)	850 (1063)	905 (1131)	905 (1131)	975 (1219)	960 (1200)	975 (1219)	1040 (1300)
400/200	800 (1000)	880 (1100)	870 (1088)	960 (1200)	960 (1200)	1030 (1288)	990 (1238)	1030 (1288)	1090 (1363)
380/190	840 (1050)	885 (1106)	860 (1075)	945 (1181)	945 (1181)	1010 (1263)	1000 (1250)	1000 (1250)	1070 (1338)
346/173	785 (981)	830 (1038)	800 (1000)	885 (1106)	885 (1106)	945 (1181)	930 (1163)	930 (1163)	1000 (1250)

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

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Mil-Std-705B			**Mil-Std-705B**		
Method	**Description**	**Value**	**Method**	**Description**	**Value**
301.1b	Insulation Resistance	>1.5 Meg	505.3b	Overspeed	1875 RPM
302.1a	High Potential Test		507.1c	Phase Sequence CCW-ODE	ABC
	Main Stator	2000 Volts	508.1c	Voltage Balance, L-L or L-N	0.20%
	Main Rotor	1500 Volts	601.4a	L-L Harmonic Maximum - Total	5.0%
	Exciter Stator	1500 Volts		(Distortion Factor)	
	Exciter Rotor	1500 Volts	601.4a	L-L Harmonic Maximum - Single	3.0%
	PMG Stator	1500 Volts	601.1c	Deviation Factor	5.0%
401.1a	Stator Resistance, Line to Line		---	TIF (1960 Weightings)	< 50
	High Wye Connection	0.003 Ohms	---	THF (IEC, BS & NEMA Weightings)	< 2 %
	Rotor Resistance	0.776 Ohms	652.1a	Shaft Current	< 0.1 ma
	Exciter Stator	22 Ohms			
	Exciter Rotor	0.043 Ohms	---	Main Stator Capacitance to ground	0.047 mfd
	PMG Stator	2.1 Ohms			
410.1a	No Load Exciter Field Amps	0.91 A DC			
	at 208/415 Volts Line to Line			**Additional Prototype Mil-Std Methods**	
420.1a	Short Circuit Ratio	0.792		**are Available on Request.**	
421.1a	Xd Synchronous Reactance	1.92 p.u.	--	Generator Frame	742
		0.271 ohms	--	Type	MAGNAMAXDVR
422.1a	X2 Negative Sequence React.	0.177 pu	--	Insulation	Class H
		0.025 ohms	--	Coupling - Single Bearing	Flexible
423.1a	X0 Zero Sequence Reactance	0.053 pu	--	Amortisseur Windings	Full
		0.007 ohms	--	Excitation	Ext. Voltage Regulated, Brushless
425.1a	X'd Transient Reactance	0.136 pu	--	Voltage Regulator	DVR2000
		0.019 ohms	--	Voltage Regulation	0.25%
426.1a	X"d Subtransient Reactance	0.1 pu			
		0.014 ohms			
--	Xq Quadrature Synch. React.	0.92 pu	--	Cooling Air Volume	2875 CFM
		0.13 ohms			
427.1a	T'd Transient Short Circuit		--	Heat rejection rate	3164 Btu's/min
	Time Constant	0.162 sec.			
428.1a	T"d Subtransient Short Circuit		--	Full load current	1696 amps
	Time Constant	0.001 sec.			
430.1a	T'do Transient Open Circuit		--	Minimum Input hp required	1381.8
	Time Constant	2.55 sec.		Efficiency at rated load :	94.6%
432.1a	Ta Short Circuit Time				
	Constant of Armature Winding	0.027 sec.	--	Full load torque	4836 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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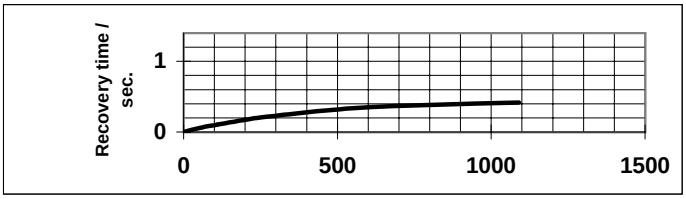
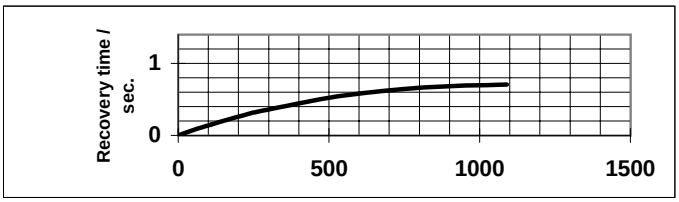
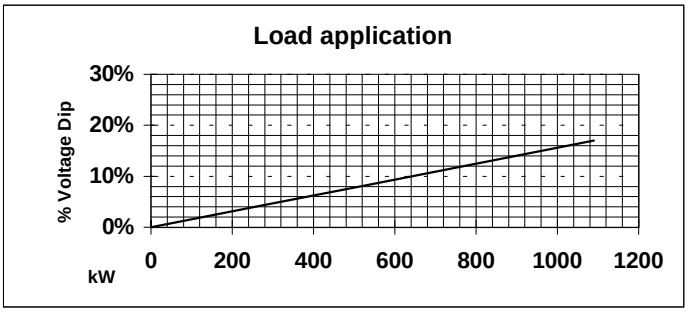
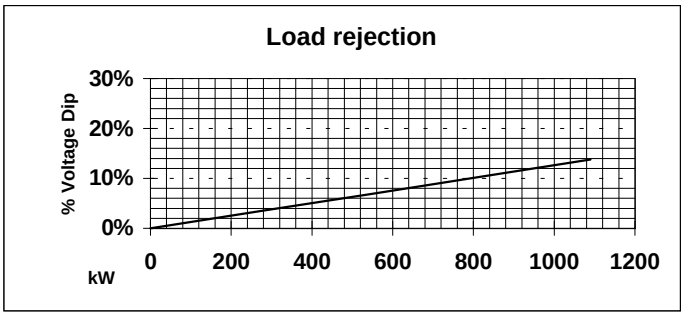
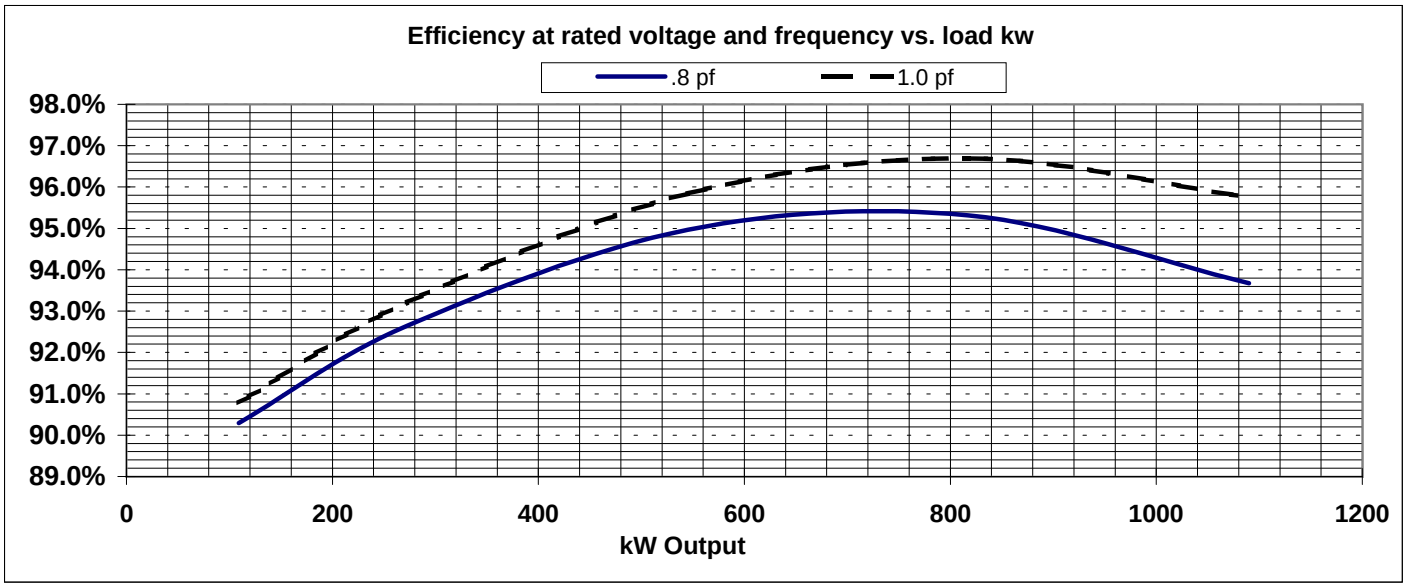
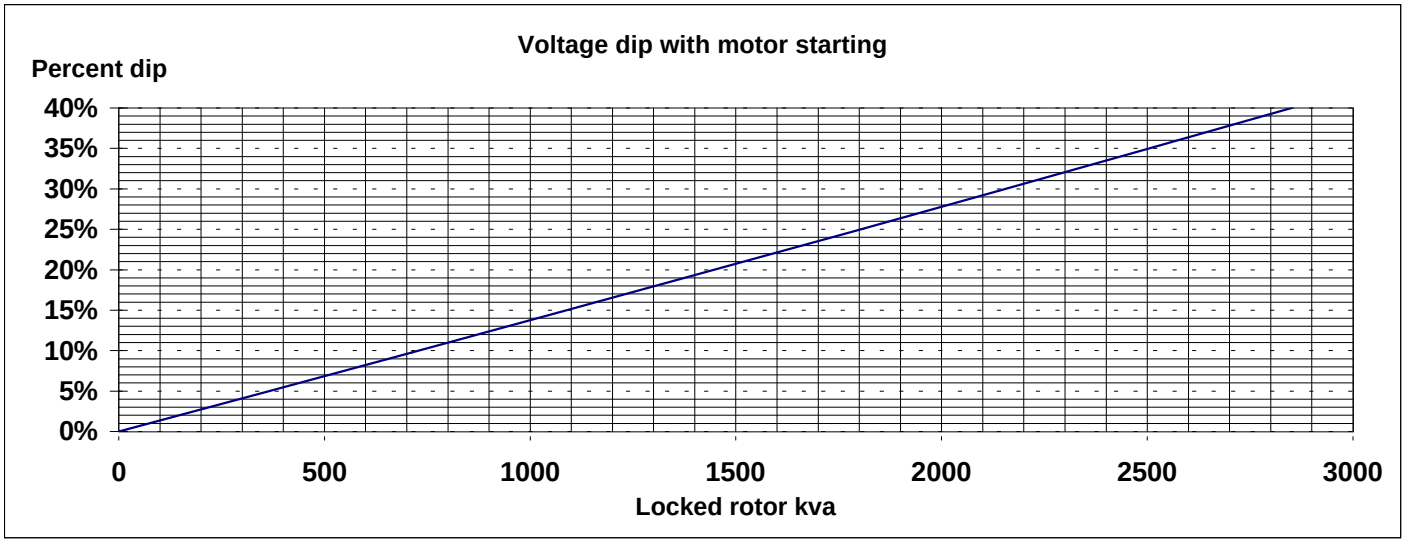
TYPICAL DYNAMIC CHARACTERISTICS

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