MARATHON ELECTRIC GENERATORS

TYPICAL SUBMITTAL DATA

MODEL : 741RSL4045

BASE MODEL: 741RSL4045 **Winding H-SG 740062**

Submittal Data: 415 Volts*, 829.6 kW, 1037 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	505 (631)	570 (713)	595 (744)	645 (806)	645 (806)	710 (888)	700 (875)	710 (888)	770 (963)
415/208	640 (800)	705 (881)	730 (913)	775 (969)	775 (969)	830 (1038)	805 (1006)	830 (1038)	885 (1106)
400/200	695 (869)	760 (950)	750 (938)	830 (1038)	830 (1038)	890 (1113)	860 (1075)	880 (1100)	945 (1181)
380/190	700 (875)	740 (925)	730 (913)	800 (1000)	800 (1000)	860 (1075)	845 (1056)	845 (1056)	915 (1144)
346/173	650 (813)	685 (856)	690 (863)	735 (919)	735 (919)	790 (988)	780 (975)	780 (975)	840 (1050)

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

Submittal Data: 415 Volts*, 829.6 kw, 1037 kVA, 0.8 P.F., 1500 RPM, 50 Hz, 3 Phase **STD. CONNECTION**

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	0.0039 Ohms	---	THF (IEC, BS & NEMA Weightings)	< 2 %
	Rotor Resistance	0.708 Ohms	652.1a	Shaft Current	< 0.1 ma
	Exciter Stator	22 Ohms			
	Exciter Rotor	0.043 Ohms	---	Main Stator Capacitance to ground	0.05 mfd
	PMG Stator	2.1 Ohms			
410.1a	No Load Exciter Field Amps	0.82 A DC			
	at 208/415 Volts Line to Line			**Additional Prototype Mil-Std Methods**	
420.1a	Short Circuit Ratio	0.817		**are Available on Request.**	
421.1a	Xd Synchronous Reactance	1.86 p.u.	--	Generator Frame	741
		0.309 ohms	--	Type	MAGNAMAXDVR
422.1a	X2 Negative Sequence React.	0.224 pu	--	Insulation	Class H
		0.037 ohms	--	Coupling - Single Bearing	Flexible
423.1a	X0 Zero Sequence Reactance	0.07 pu	--	Amortisseur Windings	Full
		0.012 ohms	--	Excitation	Ext. Voltage Regulated, Brushless
425.1a	X'd Transient Reactance	0.171 pu	--	Voltage Regulator	DVR2000
		0.028 ohms	--	Voltage Regulation	0.25%
426.1a	X"d Subtransient Reactance	0.129 pu			
		0.021 ohms			
--	Xq Quadrature Synch. React.	0.113 pu	--	Cooling Air Volume	2927 CFM
		0.019 ohms			
427.1a	T'd Transient Short Circuit		--	Heat rejection rate	2940 Btu's/min
	Time Constant	0.171 sec.			
428.1a	T"d Subtransient Short Circuit		--	Full load current	1443 amps
	Time Constant	0.01 sec.			
430.1a	T'do Transient Open Circuit		--	Minimum Input hp required	1181.4
	Time Constant	1.97 sec.		Efficiency at rated load :	94.1%
432.1a	Ta Short Circuit Time				
	Constant of Armature Winding	0.029 sec.	--	Full load torque	4135 Lb-ft

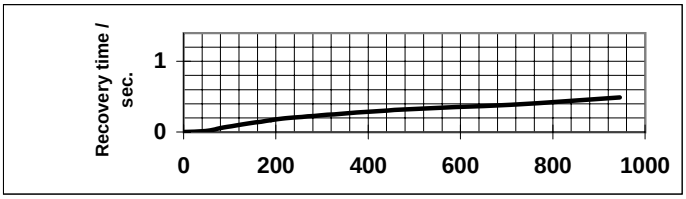
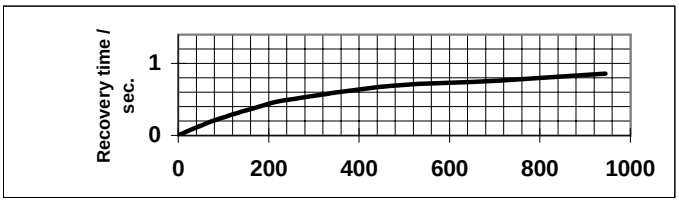
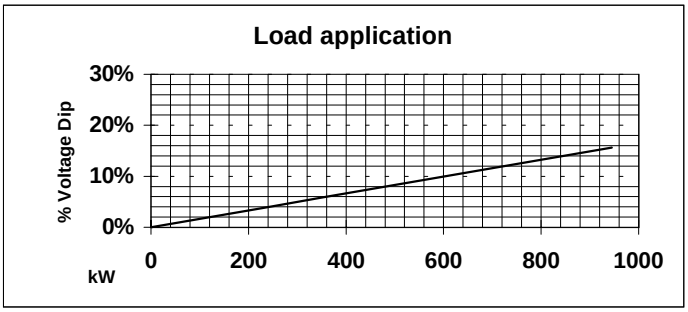
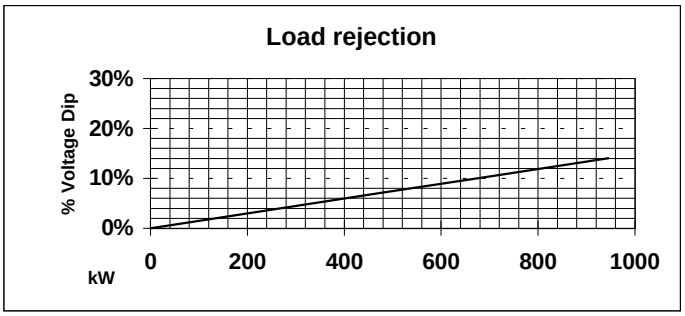
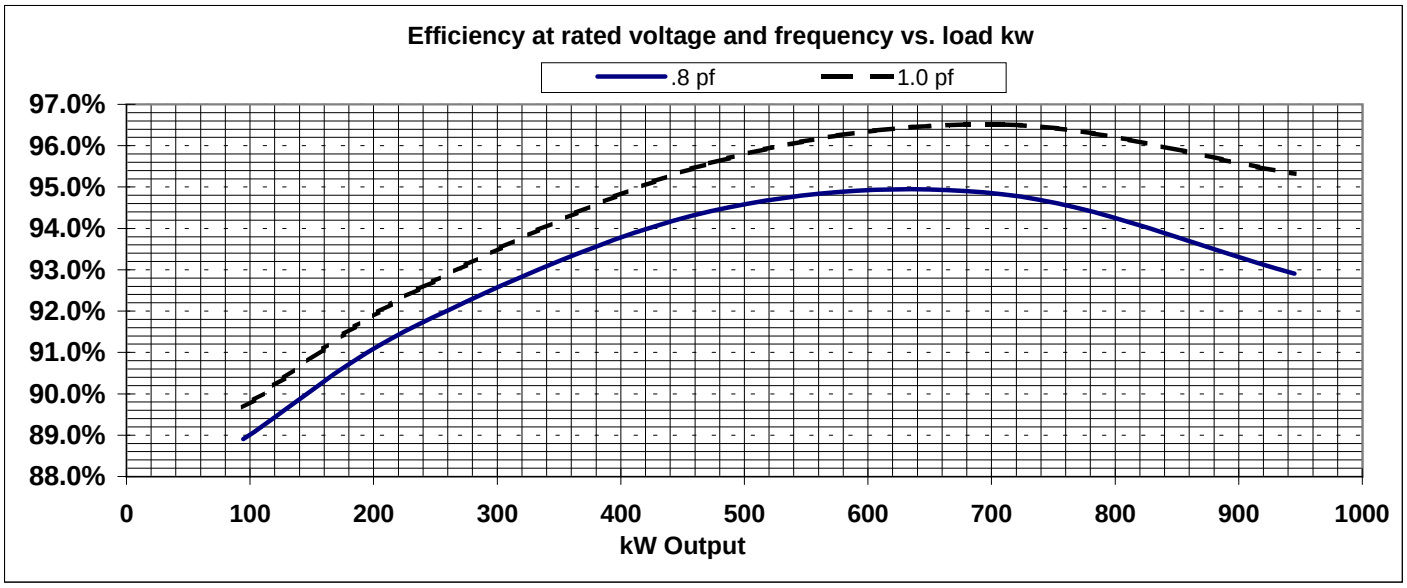
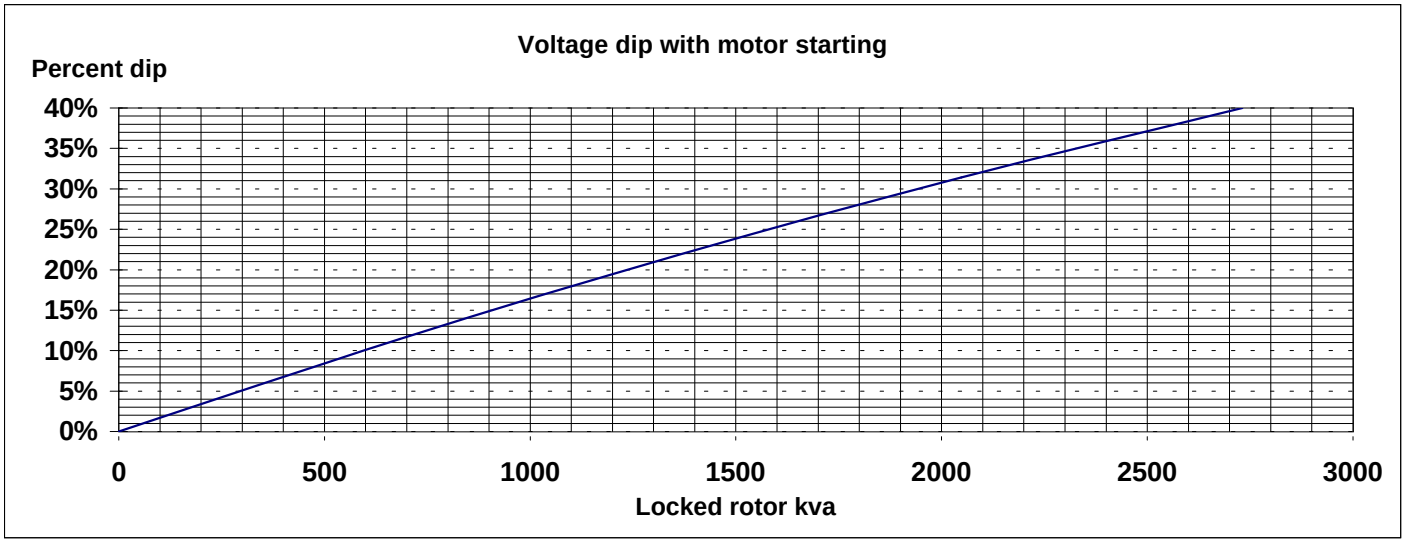
(3) Excitation support system or PMG required to sustain short circuit currents.
** Voltages refer to wye (star) connection, unless otherwise specified.*

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

MARATHON ELECTRIC GENERATORS

TYPICAL DYNAMIC CHARACTERISTICS

MODEL : 741RSL4045

BASE MODEL: 741RSL4045 **Winding H-SG 740062**

Submittal Data: 415 Volts*, 829.6 kW, 1037 kVA, 0.8 P.F., 1500 RPM, 50 Hz, 3 Phase