MARATHON ELECTRIC GENERATORS

TYPICAL SUBMITTAL DATA

MODEL : 574RSL4038

BASE MODEL: 574RSL4038 **Winding H-SG 570069**

Submittal Data: 415 Volts*, 724.8 kW, 906 kVA, 0.8 P.F., 1500 RPM, 50 Hz, 3 Phase

10/29/2001

Kilowatt ratings at	**1500 RPM**	**50 Hertz**	**4 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	465 (581)	520 (650)	540 (675)	580 (725)	580 (725)	650 (813)	620 (775)	635 (794)	680 (850)
415	550 (688)	605 (756)	600 (750)	660 (825)	660 (825)	725 (906)	685 (856)	710 (888)	750 (938)
400	570 (713)	625 (781)	590 (738)	680 (850)	680 (850)	745 (931)	700 (875)	730 (913)	770 (963)
380	585 (731)	620 (775)	570 (713)	665 (831)	665 (831)	720 (900)	705 (881)	710 (888)	765 (956)
346	540 (675)	570 (713)	535 (669)	615 (769)	615 (769)	660 (825)	650 (813)	650 (813)	700 (875)

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	2000 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	0.0048 Ohms
	Rotor Resistance	0.601 Ohms
	Exciter Stator	23 Ohms
	Exciter Rotor	0.045 Ohms
	PMG Stator	2.1 Ohms
410.1a	No Load Exciter Field Amps	0.77 A DC
	at 415 Volts Line to Line	
420.1a	Short Circuit Ratio	0.646
421.1a	Xd Synchronous Reactance	2.35 p.u.
		0.447 ohms
422.1a	X2 Negative Sequence React.	0.182 pu
		0.035 ohms
423.1a	X0 Zero Sequence Reactance	0.046 pu
		0.009 ohms
425.1a	X'd Transient Reactance	0.138 pu
		0.026 ohms
426.1a	X"d Subtransient Reactance	0.107 pu
		0.02 ohms
--	Xq Quadrature Synch. React.	1.06 pu
		0.202 ohms
427.1a	T'd Transient Short Circuit	
	Time Constant	0.132 sec.
428.1a	T"d Subtransient Short Circuit	
	Time Constant	0.01 sec.
430.1a	T'do Transient Open Circuit	
	Time Constant	2.4 sec.
432.1a	Ta Short Circuit Time	
	Constant of Armature Winding	0.023 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	0.04 mfd

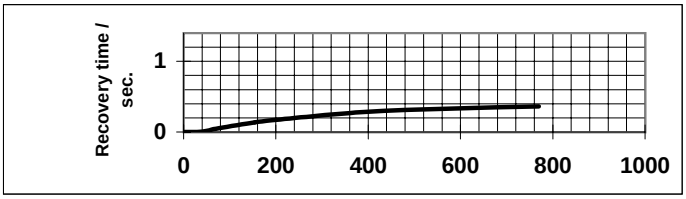
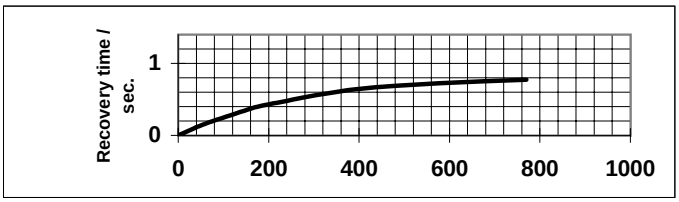
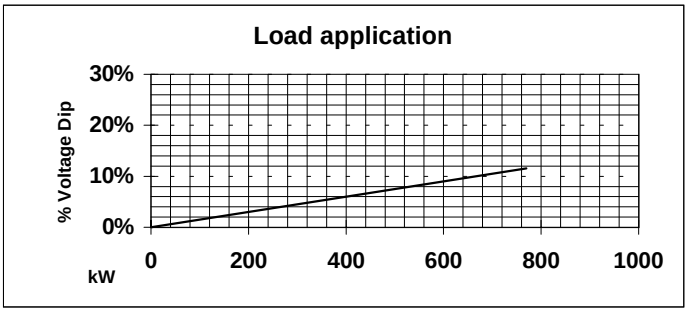
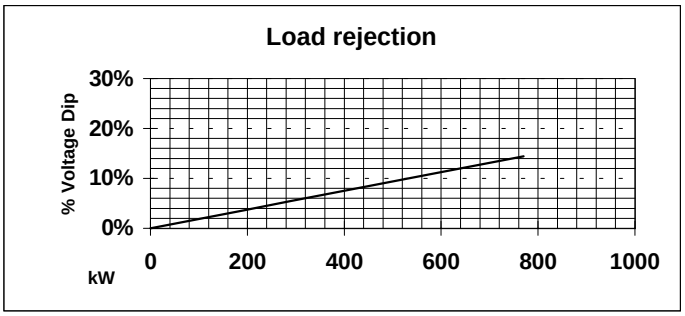
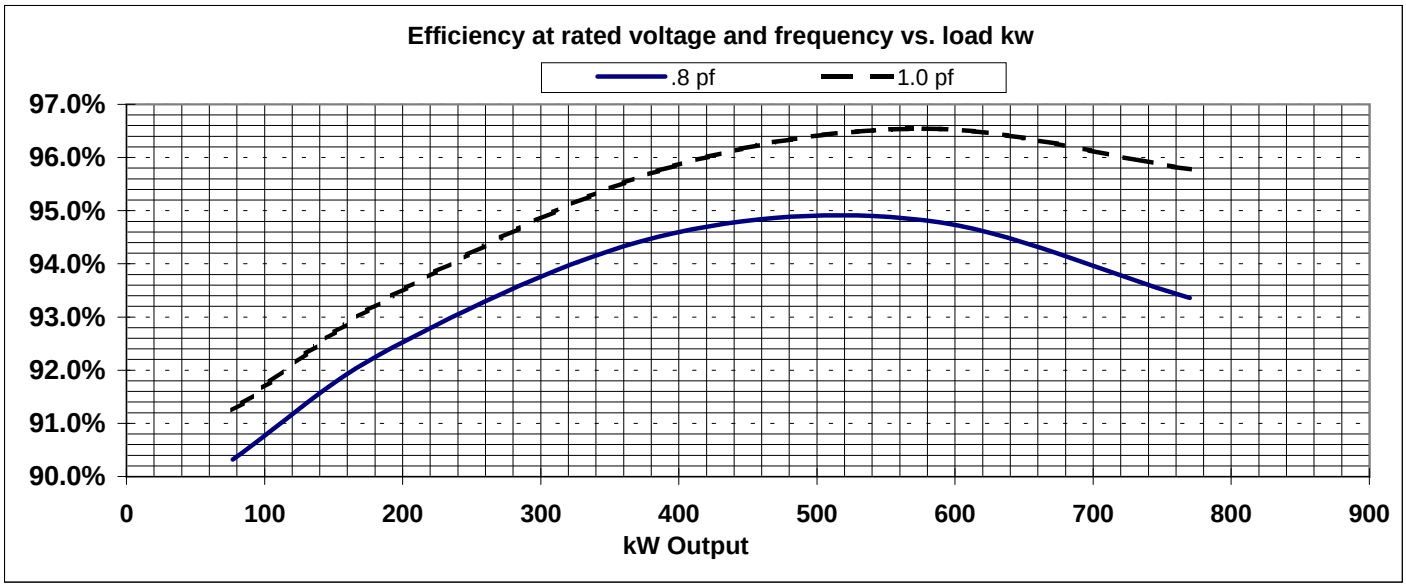
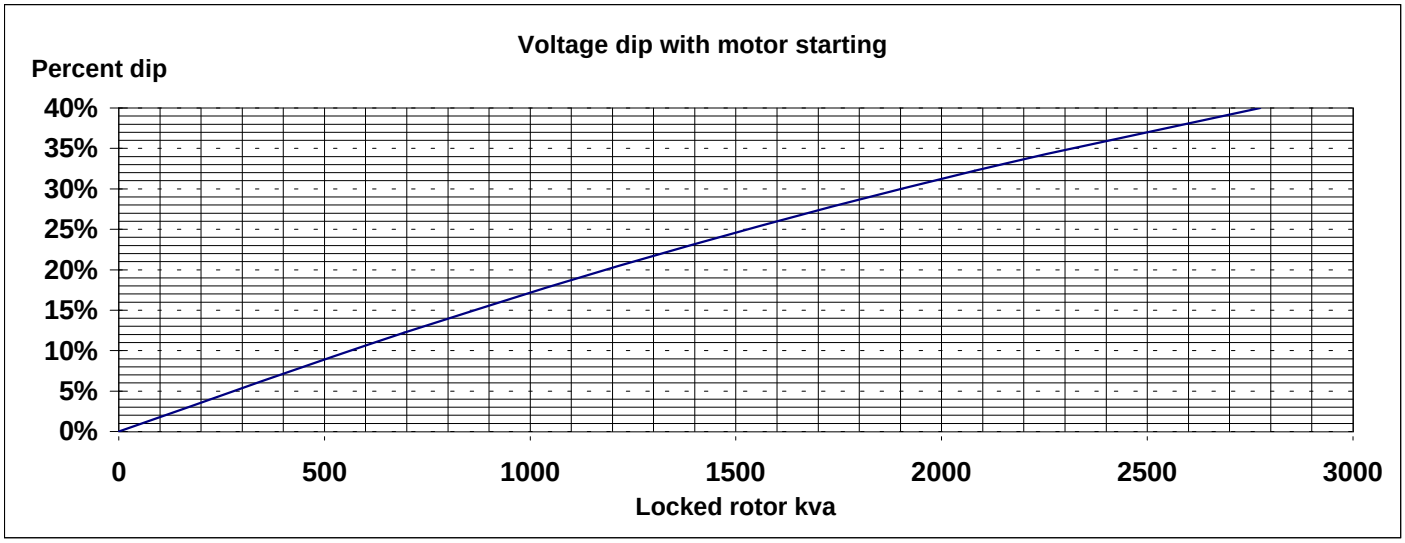
Additional Prototype Mil-Std Methods are Available on Request.

--	Generator Frame	574
--	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	900 CFM
--	Heat rejection rate	2698 Btu's/min
--	Full load current	1260 amps
--	Minimum Input hp required	1035.2
	Efficiency at rated load :	93.9%
--	Full load torque	3623 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

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