MARATHON ELECTRIC GENERATORS

TYPICAL SUBMITTAL DATA

MODEL : 574RSL4036

BASE MODEL: 574RSL4036 **Winding H-SG 570077**

Submittal Data: 415 Volts*, 640 kW, 800 kVA, 0.8 P.F., 1500 RPM, 50 Hz, 3 Phase

10/23/2001

Kilowatt ratings at	**1500 RPM**		**50 Hertz**		**10 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	350 (438)	395 (494)	415 (519)	455 (569)	455 (569)	520 (650)	500 (625)	505 (631)	550 (688)
415/208	480 (600)	530 (663)	550 (688)	585 (731)	585 (731)	640 (800)	610 (763)	630 (788)	670 (838)
400/200	535 (669)	585 (731)	580 (725)	635 (794)	635 (794)	690 (863)	650 (813)	680 (850)	715 (894)
380/190	540 (675)	570 (713)	560 (700)	615 (769)	615 (769)	665 (831)	655 (819)	655 (819)	710 (888)
346/173	510 (638)	540 (675)	530 (663)	580 (725)	580 (725)	625 (781)	615 (769)	615 (769)	665 (831)

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

Submittal Data: 415 Volts*, 640 kw, 800 kVA, 0.8 P.F., 1500 RPM, 50 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	1500 Volts
401.1a	Stator Resistance, Line to Line	
	High Wye Connection	0.0049 Ohms
	Rotor Resistance	0.584 Ohms
	Exciter Stator	23 Ohms
	Exciter Rotor	0.045 Ohms
	PMG Stator	2.1 Ohms
410.1a	No Load Exciter Field Amps	0.94 A DC
	at 208/415 Volts Line to Line	
420.1a	Short Circuit Ratio	0.919
421.1a	Xd Synchronous Reactance	1.99 p.u.
		0.428 ohms
422.1a	X2 Negative Sequence React.	0.158 pu
		0.034 ohms
423.1a	X0 Zero Sequence Reactance	0.047 pu
		0.01 ohms
425.1a	X'd Transient Reactance	0.113 pu
		0.024 ohms
426.1a	X"d Subtransient Reactance	0.102 pu
		0.022 ohms
--	Xq Quadrature Synch. React.	0.848 pu
		0.183 ohms
427.1a	T'd Transient Short Circuit	
	Time Constant	0.127 sec.
428.1a	T"d Subtransient Short Circuit	
	Time Constant	0.014 sec.
430.1a	T'do Transient Open Circuit	
	Time Constant	2.33 sec.
432.1a	Ta Short Circuit Time	
	Constant of Armature Winding	0.02 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	0.037 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	930 CFM
--	Heat rejection rate	2374 Btu's/min
--	Full load current	1113 amps
--	Minimum Input hp required	913.8
	Efficiency at rated load :	93.9%
--	Full load torque	3198 Lb-ft

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

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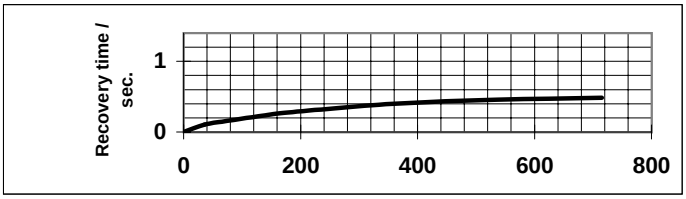
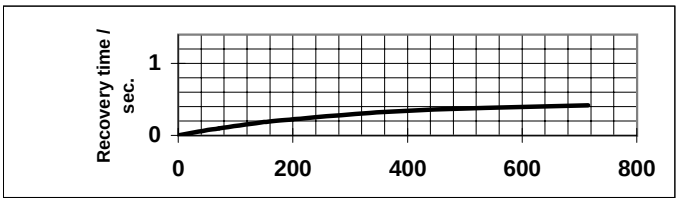
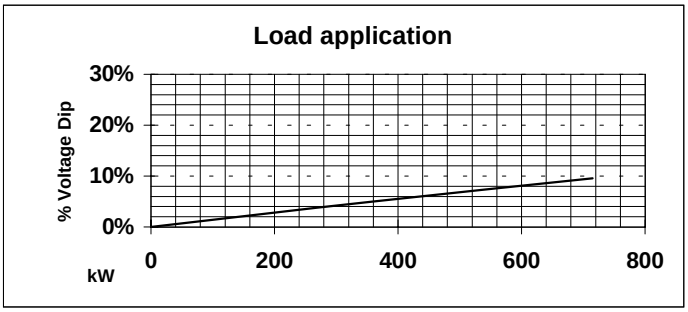
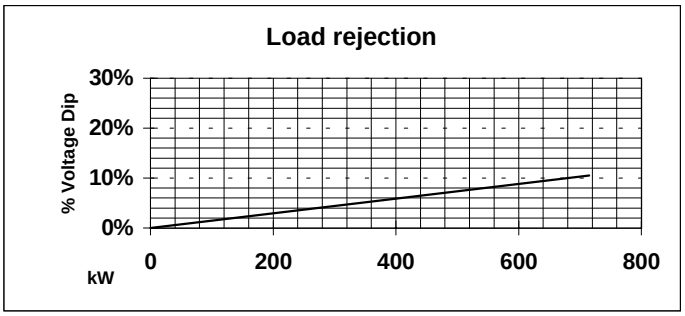
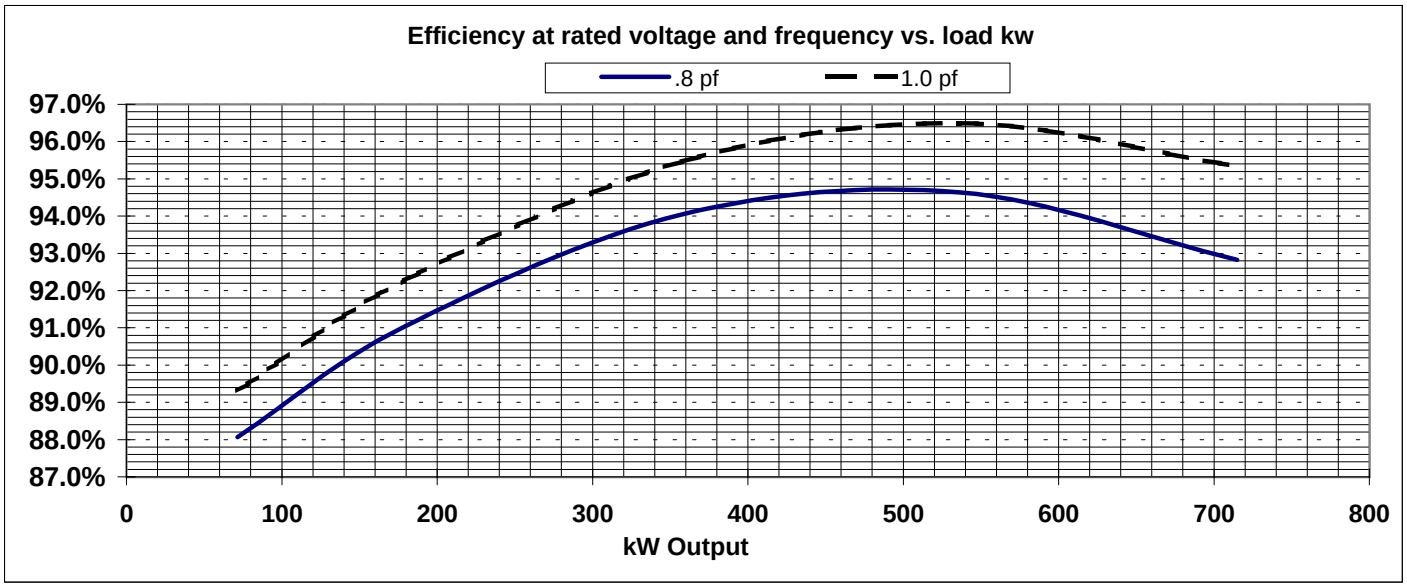
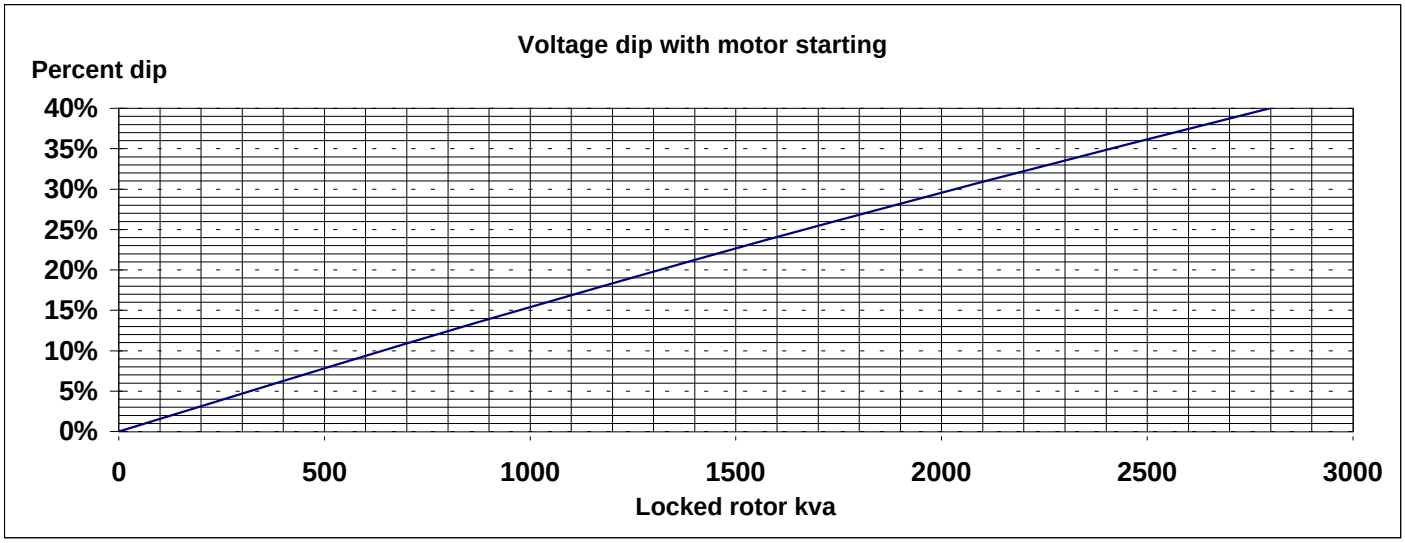
TYPICAL DYNAMIC CHARACTERISTICS

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