MARATHON ELECTRIC GENERATORS

TYPICAL SUBMITTAL DATA

MODEL : 572RSL4028

BASE MODEL: 572RSL4028 **Winding H-SG 570080**

Submittal Data: 480 Volts*, 560 kW, 700 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase

11/12/2002

Kilowatt ratings at 1800 RPM 60 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
480/240	445 (556)	490 (613)	505 (631)	535 (669)	535 (669)	560 (700)	555 (694)	560 (700)	610 (763)
460/230	480 (600)	520 (650)	510 (638)	560 (700)	560 (700)	585 (731)	575 (719)	585 (731)	585 (731)
440/220	470 (588)	500 (625)	500 (625)	535 (669)	535 (669)	560 (700)	560 (700)	560 (700)	560 (700)
416/208	450 (563)	475 (594)	470 (588)	510 (638)	510 (638)	525 (656)	525 (656)	525 (656)	535 (669)
380/190	415 (519)	440 (550)	440 (550)	470 (588)	470 (588)	470 (588)	470 (588)	470 (588)	470 (588)

① Rise 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	0.0092 Ohms
	Rotor Resistance	0.423 Ohms
	Exciter Stator	23 Ohms
	Exciter Rotor	0.045 Ohms
	PMG Stator	2.1 Ohms
410.1a	No Load Exciter Field Amps	0.76 A DC
	at 240/480 Volts Line to Line	
420.1a	Short Circuit Ratio	0.653
421.1a	Xd Synchronous Reactance	2.68 p.u.
		0.882 ohms
422.1a	X2 Negative Sequence React.	0.213 pu
		0.07 ohms
423.1a	X0 Zero Sequence Reactance	0.051 pu
		0.017 ohms
425.1a	X'd Transient Reactance	0.144 pu
		0.047 ohms
426.1a	X"d Subtransient Reactance	0.121 pu
		0.04 ohms
--	Xq Quadrature Synch. React.	1.08 pu
		0.355 ohms
427.1a	T'd Transient Short Circuit	
	Time Constant	0.12 sec.
428.1a	T"d Subtransient Short Circuit	
	Time Constant	0.009 sec.
430.1a	T'do Transient Open Circuit	
	Time Constant	1.95 sec.
432.1a	Ta Short Circuit Time	
	Constant of Armature Winding	0.021 sec.

Mil-Std-705B Method	Description	Value
505.3b	Overspeed	2250 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	0.03 mfd
	Additional Prototype Mil-Std Methods are Available on Request.	
--	Generator Frame	572
--	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	1480 CFM
--	Heat rejection rate	2202 Btu's/min
--	Full load current	842 amps
--	Minimum Input hp required	802.6
	Efficiency at rated load :	93.5%
--	Full load torque	2341 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 : 2002.1

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TYPICAL DYNAMIC CHARACTERISTICS

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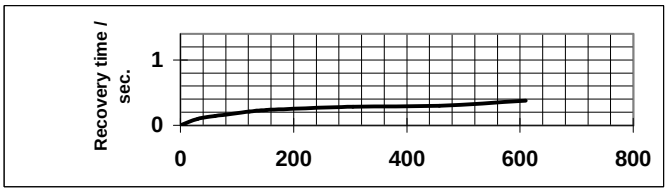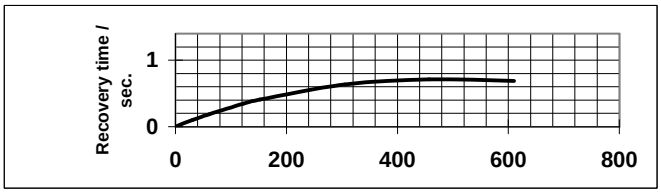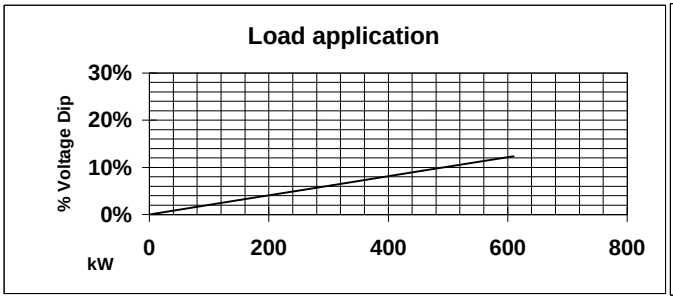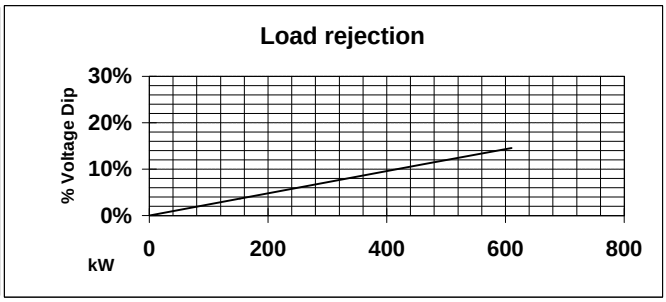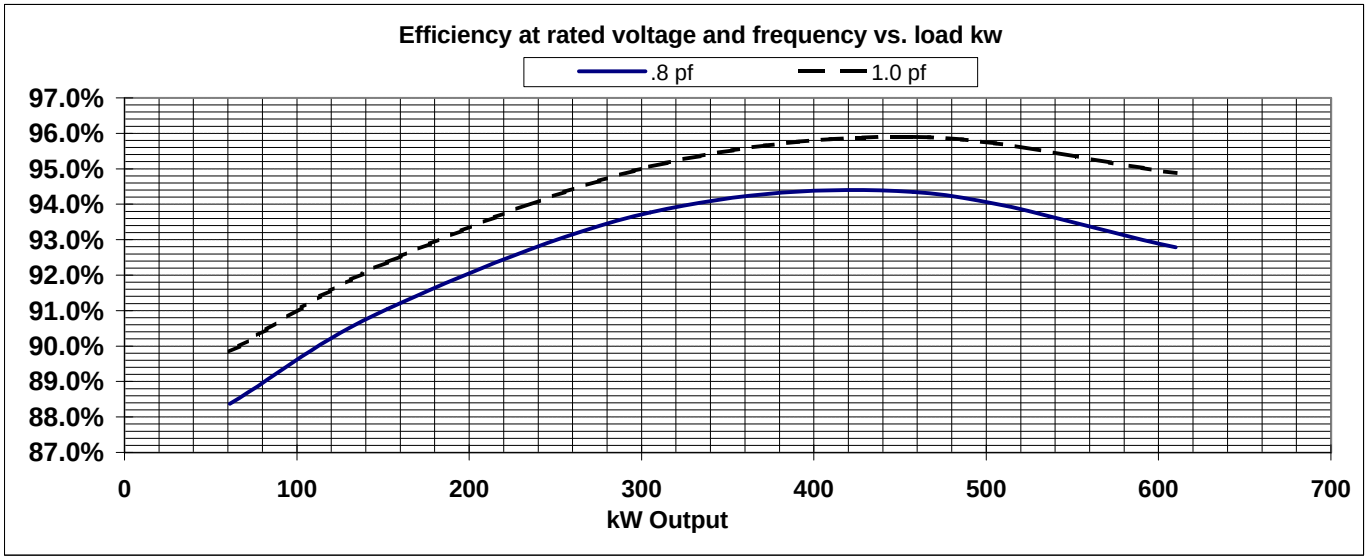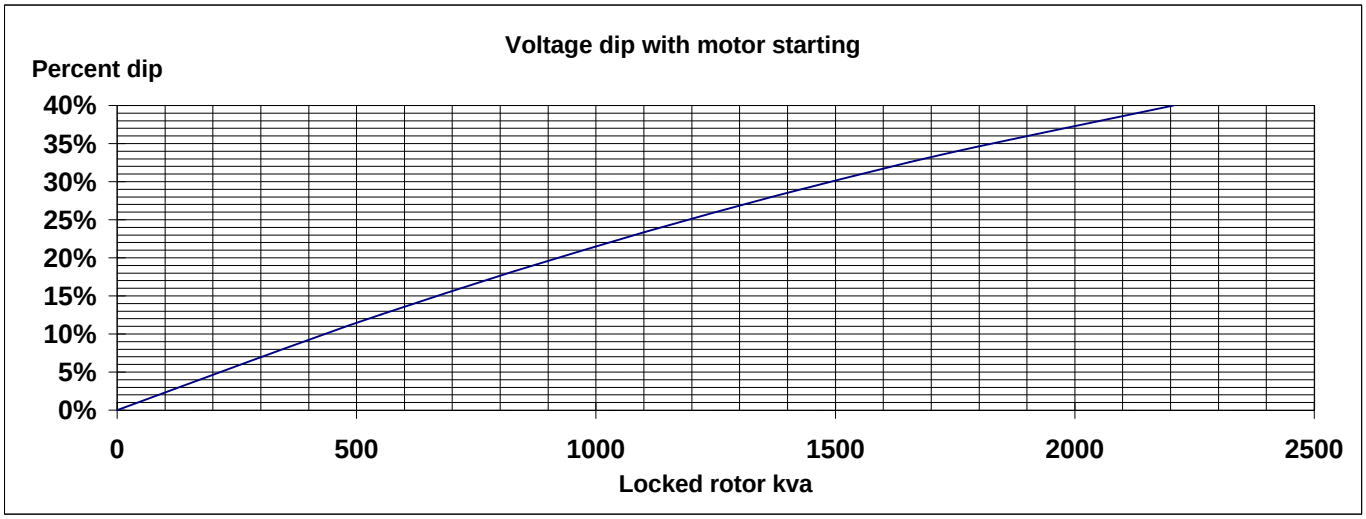
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