MARATHON ELECTRIC GENERATORS

TYPICAL SUBMITTAL DATA

MODEL : 572RSL4027

BASE MODEL: 572RSL4027 **Winding H-SG570072**

Submittal Data: 480 Volts*, 515.2 kW, 644 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase

Kilowatt ratings at	**1800 RPM**			**60 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 ② British Standard**	**105º C ① Continuous**	**130º C ① Standby**	**125º C ② British Standard**	**125º C ① Continuous**	**150º C ① Standby**
480/240	440 (550)	465 (581)	475 (594)	500 (625)	500 (625)	515 (644)	515 (644)	515 (644)	560 (700)
460/230	425 (531)	450 (563)	460 (575)	480 (600)	480 (600)	515 (644)	505 (631)	505 (631)	545 (681)
440/220	410 (513)	430 (538)	440 (550)	460 (575)	460 (575)	500 (625)	485 (606)	485 (606)	520 (650)
416/208	400 (500)	415 (519)	415 (519)	445 (556)	445 (556)	475 (594)	470 (588)	470 (588)	505 (631)
380/190	360 (450)	380 (475)	390 (488)	405 (506)	405 (506)	405 (506)	405 (506)	405 (506)	405 (506)

① *Rise by resistance method, Mil-Std-705, Method 680.1b.* ② *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	0.0126 Ohms
	Rotor Resistance	0.398 Ohms
	Exciter Stator	23 Ohms
	Exciter Rotor	0.045 Ohms
	PMG Stator	2.1 Ohms
410.1a	No Load Exciter Field Amps	0.7 A DC
	at 240/480 Volts Line to Line	
420.1a	Short Circuit Ratio	0.591
421.1a	Xd Synchronous Reactance	2.67 pu
		0.955 ohms
422.1a	X2 Negative Sequence React.	0.226 pu
		0.081 ohms
423.1a	X0 Zero Sequence Reactance	0.056 pu
		0.02 ohms
425.1a	X'd Transient Reactance	0.162 pu
		0.058 ohms
426.1a	X''d Subtransient Reactance	0.137 pu
		0.049 ohms
--	Xq Quadrature Synchronous	1.1 pu
		0.393 ohms
427.1a	T'd Transient Short Circuit	
	Time Constant	0.114 sec.
428.1a	T''d Subtransient Short Circuit	
	Time Constant	0.01 sec.
430.1a	T'do Transient Open Circuit	
	Time Constant	1.68 sec.
432.1a	Ta Short Circuit Time	
	Constant of Armature Winding	0.017 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	DVR2000E+
--	Voltage Regulation	0.25%
--	Cooling Air Volume	1520 CFM
--	Heat rejection rate	2034 Btu's/min
--	Full load current	775 amps
--	Minimum Input hp required	738.5
	Efficiency at rated load :	93.5%
--	Full load torque	2154 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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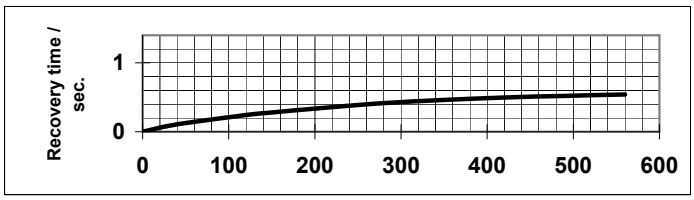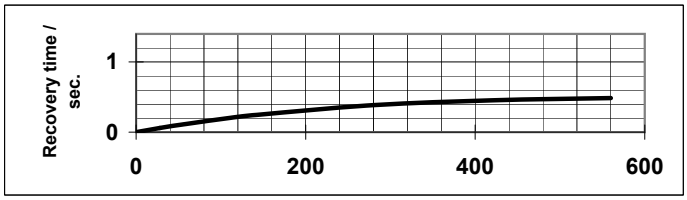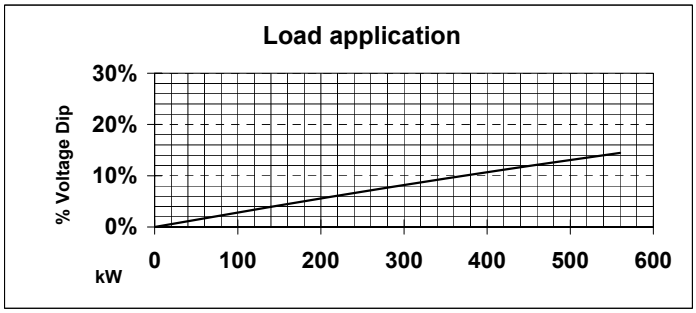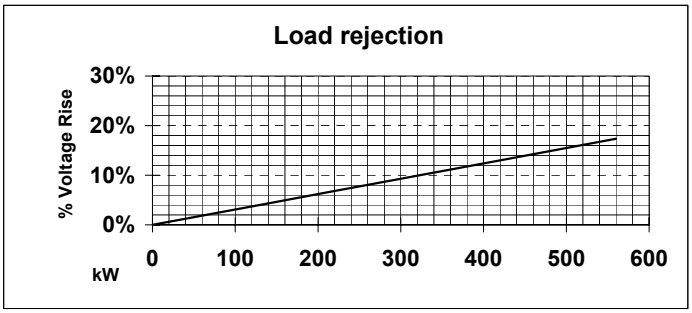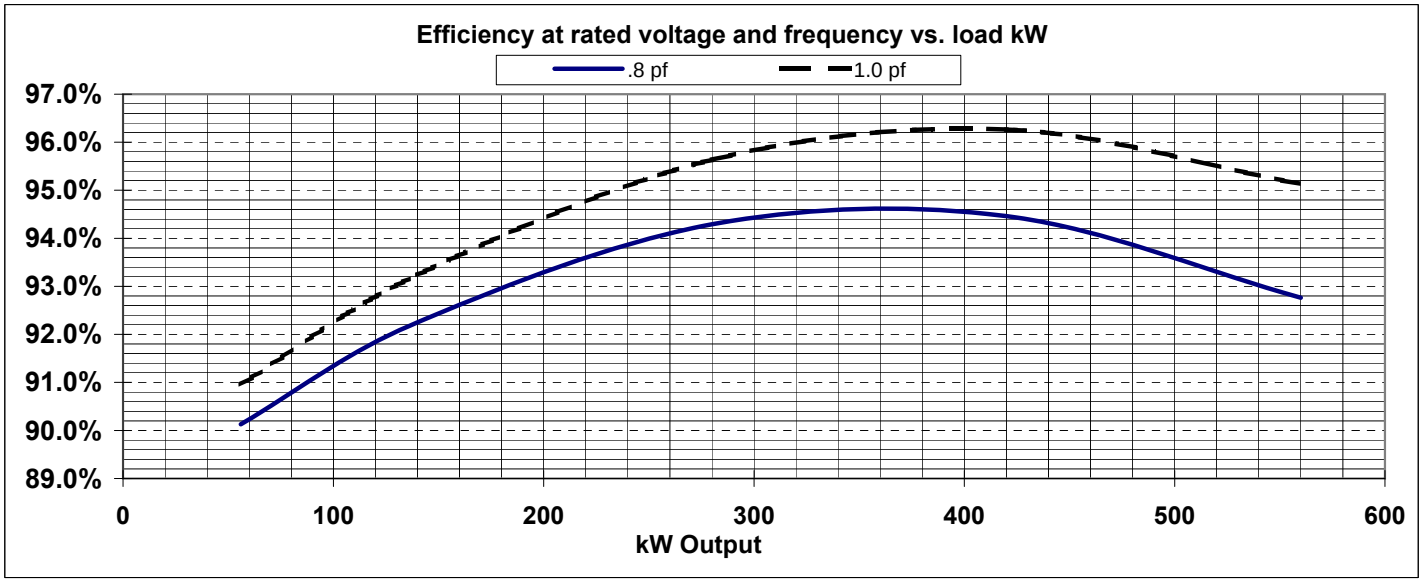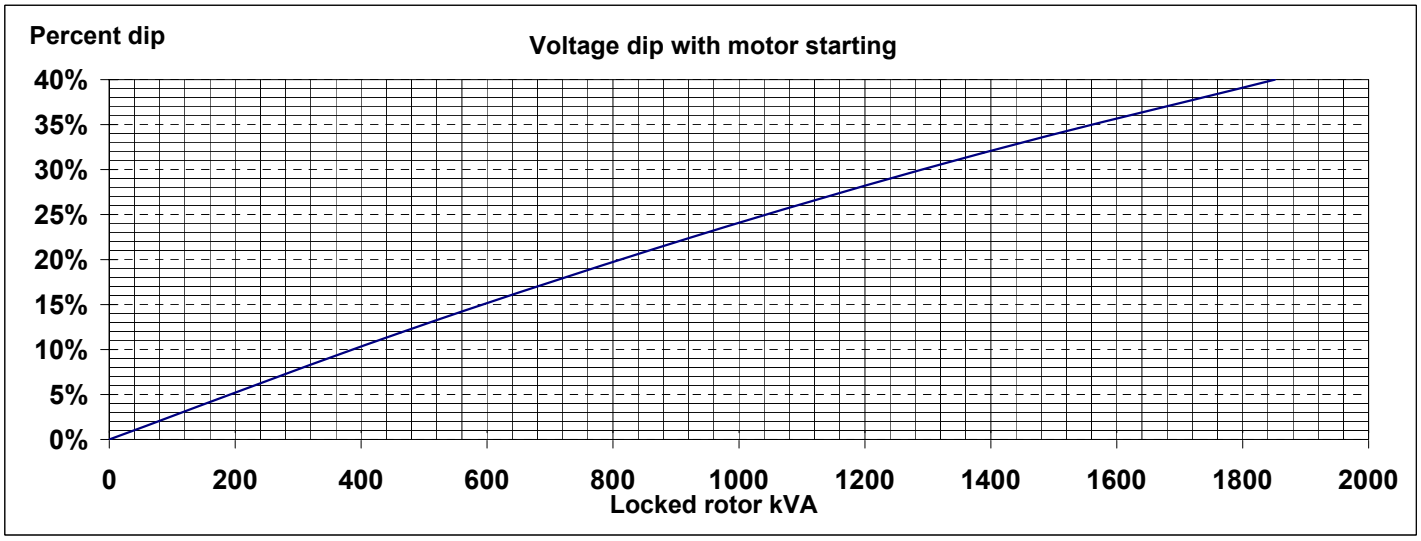
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